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THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. I.—5TH YEAR. SYDNEY: SATURDAY, APRIL 6, 1918. No. 14.

Presidential Address.[1]

By R. Gordon Craig, M.B., Ch.M. (Syd.),

Retiring President of the New South Wales Branch of the British Medical Association.

When we accept and enjoy the privileges of modern life, how little do we appreciate the work and forethought of our forebears that has made these privileges possible. We take it all as our right or, if we have any feeling at all in the matter, it is one of criticism rather than gratitude. Even in an association of such comparatively recent growth as the British Medical Association few of its members have any idea of the extent of our indebtedness to the disinterested and self-sacrificing medical men who have been responsible for its present high standard of efficiency and organization. There is now no corner of our world-wide Empire where a member may not have the hand of welcome extended to him by one belonging to his own Association, and if it be his intention to settle down, he is automatically a member of that Branch, with all the privileges of help and protection in a professional difficulty.

I had occasion recently to put the organization of our Association to a practical test. An action of mine had been misinterpreted and led to a misunderstanding between one of our local associations and myself. The organization of that body of men gave me the opportunity of meeting them in person. The action that gave occasion for the interview was thoroughly thrashed out, and as a result all misunderstandings were cleared up. My debt to the Association was felt to a degree never before appreciated. It brought home to me my ignorance of the past history of the Association, and I felt that a short review of the growth and evolution of it would be a fitting subject to put before you on the last occasion on which I will have the opportunity of addressing you as President.

In the official grey-coloured journal that comes with such unfailing regularity to remind us once a week that we are a unit of a great Association, there is a medallion portrait of a fine old English gentleman, dressed in the peculiar manner of his day. On this portrait there is a legend, "Sir Charles Hastings, Founder, 1832." In the soul of this man, nearly a century ago, there arose a yearning for a wider outlook and freer intercourse amongst his fellow medical men, and on the ninetenth day of July, 1832, fifty medical men attended at a meeting at the Infirmary in the ancient city of Worcester. This meeting was convened by Doctor Hastings, for he had no title then; it was not till many years afterwards that his great work was publicly recognized in the manner that obtains even to the present day, with, however, this notable addition, that recognition has been extended to the sex that has shown itself equal, if not greater than man in the spirit of self-sacrifice and devotion to duty in these critical times of national peril.

At the small gathering in Worcester it was unanimously decided to form an association, which was called "The Provincial Medical and Surgical Association." It started with a membership of the fifty who were present. The very name is significant. It is to be remembered that in England, even up to the present day, with its free lines of communication by rail and motor car, there are towns and districts within a few miles of one another, where the inhabitants are almost total strangers. So conservative are they, so hemmed in by natural and artificial barriers, that their very language is different. It is only necessary to call to mind the soft accents of the south of England and the hard, rugged diction of the north, to show that equal differences exist in the temperament and character of the people. To found a medical society that would break down these barriers as they existed nearly one hundred years ago, was truly a great step. The name "Provincial" no doubt was settled on to include all those districts outside the great city of London, with its millions of citizens and the accompanying facilities for organization in civic as well as in medical matters. It is not hard to understand the necessity for the provincial association, if a visitor from the country to the medical centres of London in those times was received with no more courtesy than a visitor from Australia was ten years ago. There is an insidious tendency on the part of certain men situated in the larger centres, to assume an air of superiority and patronage towards "the man from the country," the man who has not been so favourably situated. Particularly is this attitude noticeable in the man who has not made his pilgrimage to the medical shrines of other cities, or even another part of his own city. Without having come in personal contact with those who are making history in medicine and surgery, with its stimulating and inspiring influence, it is impossible for even those men standing high in the profession to escape an unsympathetic attitude towards the medical stranger within his gates. Dr. Hastings recognized this when, in his opening address at the foundation of the Association, he laid down as one of its objects, apart from the general one of advancement of medical science, "the maintenance of the honour and respectability of the profession by promoting friendly intercourse and free communication of its members." It is interesting to see that for twenty years the Association was imbued with the restricted spirit contained in its title, and it was not until the year 1853, when the curious coincidence occurred that the number of members in the Association was 1,853, the same as the units in that year and the three years subsequent to this date, that the first reform of its constitution took place. The title, and with it the spirit, of the Association

[1] Delivered at the Annual Meeting of the New South Wales Branch of the British Medical Association on March 22, 1918.

was altered. It felt the impelling force of growth and widening influence and assumed the title that stands to the present day, the "British Medical Association." Up to this time, it had held its annual meetings in the provinces, and for a further eight years it still continued to do so. Eight years after the alteration of the title, the first annual meeting was held in London. That means that it took thirty long years of "friendly intercourse and free communication" to break down the intolerance of the city and the prejudices of the provinces sufficiently to admit of the annual meeting taking place in the great metropolis. The national prejudice of the Scotsman had been overcome four years before, when the annual meeting was held for the first time in Edinburgh, the membership at that time being some 2,000. Wales had come in earlier in the campaign; but Ireland, with her customary attitude of independence, did not give way until five years after the London meeting. When Scotland and Ireland had been invaded the membership increased by 50%, and by slow, yet certain steps the relations between the members of the profession in the Empire have been extended, so that now it stretches to every part of the overseas dominions. In the year 1877, the first annual meeting took place in Montreal, Canada, when the membership had grown to 16,000. The latest figures available at the end of 1916 give the total membership as over 20,000. Truly a fitting memorial to that man, whose soul arose above the sordid accompaniments of his daily work, and sought the accomplishment of a great brotherhood of his fellow medical men.

In 1854, when the broader scope and nature of the Association was marked by the assumption of its present title, the constitution was altered to meet the new conditions, and twenty years later (1874), after due deliberation, the association was incorporated under the Companies Acts as a company limited in the liability of the subscribers by guarantee and, being carried on not for the purpose of gain, was entitled to leave out the word "limited." Some necessary modifications in the constitution were made to comply with this Act and the constitution then remained without alteration until the year 1902. Up to this time the whole of the United Kingdom had arranged itself into groups, called Branches, more or less natural, according to the local requirements of members. In the year mentioned, these Branches, which had grown much in the manner of Topsy, were reviewed. The name of the unit was now altered to Division. New Divisions were made where necessary and two or more merged in one. The basic idea of this form of unit being that any member could attend a meeting of his Division with the loss of only half a day from his professional duties. This divisional unit elects its own officers and assumes the government of its own affairs, in accordance with the general rules and regulations of the central body. The boundaries of the Division are determined by the Organization Committee of the central Council, after fully ascertaining the wishes of the medical men in that particular area. For organization purposes, certain of these Divisions are grouped into a Branch, which has the power of electing a member to the central Council, if there is a sufficient number on its membership roll; if not, it is grouped with another Branch. Of these Divisions there are 209, grouped into Branches representing 153 constituencies, and these constituencies elect 52 representatives to the central Council. Under the old constitution, previous to 1902, the central Council was the supreme body, but in 1902, the great and fundamental alteration in the constitution of the Association was the formation of the Representative Body, quite apart from the central Council. Every Division or group of Divisions, consisting of at least 50 members, has the right to elect one member. These representatives have an annual meeting and special meetings throughout the year to conduct the affairs of the Association. Practically, they form the governing body of the Association. The central Council is the executive body, and their work consists of carrying out the policy as laid down at a representative or a general meeting of members. In an emergency the Council may act, but their action is subject to the approval of the representative meeting.

The actual work of the Council, however, is really done by working committees, such as the organization, ethical, etc. Generally speaking, no decision is arrived at by the central Council until the matter has been referred to the appropriate committee specially qualified to decide upon the particular matter.

The Council, in addition to the members elected by the Branches, consists of certain officers of the Association, together with members representing the Army and Navy and Indian Medical Services; over and above these the Council has the power to co-opt members having special qualifications, to the extent of one-tenth of the number elected. Under the 1902 constitution the overseas Branches have the right, with their sister Branches in England, to send one or more representatives to the Annual Representative Meeting held in England, and each year this right has been exercised by the Branch in New South Wales. These same overseas Branches were asked, after the adoption of the new constitution, to consider in what way, if any, the divisional basis could be adapted to their requirements, and with the limited time at my disposal, I will try to show in what way that request has been met in New South Wales.

In this State, the growth and development of our Association has progressed in the same certain way as in the Mother Country, but with some essential differences. In the early days, 1880 to be exact, our Branch was formed by those who were, without exception, medical men with the degrees of British or European Universities, for our own medical school had then been little more than thought of. The whole profession of Sydney and its suburbs could be counted in units. I well remember at that time, when I first came to Australia as a youngster, the whole of North Sydney was cared for by one solitary practitioner, Dr. Ward; our own Dr. F. Antill Pockley was the second. These practitioners of the city and suburbs, coming from the old centres, where

our parent Association had by natural growth established itself as the organized body of the profession, could not escape from the influence that it had had upon them. They established a Branch here, more I think from the force of example than any marked necessity for such an organization.

The practitioners in the country were so few and so far apart that it was impracticable even to consider their organization, and the Branch consisted chiefly, if not wholly, for the benefit of the metropolitan and suburban areas. In the early days the duties of a councillor were not of an onerous type, and a meeting once a month, or even less often than that, would suffice to conduct the whole business of the Association. Year by year the work grew to such an extent that meetings were held once a fortnight, or oftener, to try to cope with it. From a sense of duty to those who had placed him in a position of trust, each councillor considered that he should know at first hand all that went on at each meeting. This method of work proved such a tax upon councillors that some way had to be found out of the difficulty. Eventually, about four years ago, chiefly through the energy and determination of our honorary Secretary, Dr. R. H. Todd, the Committee system was worked out much on the same lines as in the parent Association. At present the work of one of these committees amounts to more than the work of the whole Council of ten years ago.

Some twenty-eight years ago, 1890, a great and important event took place, when the first Local Associations were formed in the Eastern and Western suburbs of Sydney. There is a considerable difference of opinion between these two bodies as to which was the actual first-born; but it is near enough to the truth, I think, to say they are twins. Some twenty years elapsed, however, before this movement spread to the country. To Mr. Barr Brown, our honorary organizer at that time, we are chiefly indebted for this extension of our influence. At much personal loss, both financial and of time, even with risk to his life, mounted on his motor-cycle, he bumped over the unmade back country roads of this State from north to south and east to west, preaching the gospel of organization and the introduction of the common form of agreement with friendly societies. From this time onwards the systematic organization of the State was undertaken, and now we have the city, suburbs and country areas, all defined in accordance with natural boundaries and the wishes of the men in the locality. There are seventeen in all. Like its analogue, the Division in England, the local association undertakes the conduct of its own affairs, subject to the rules and regulations of the Branch. The policy of the central Council, as at present constituted, is to make the local associations more and more responsible for the conduct of their own affairs, and, were the standard of work throughout these seventeen bodies uniform, there would be little or no difficulty. Some carry on their work with enthusiasm, public spirit and wisdom; others there are, whose only claim to recognition is the name they bear. They have not enough vitality even to answer a letter.

With the birth and growth of our local associations there arose the natural desire to have some voice in the conduct of the general affairs of the parent branch; and so came into being the Annual Meeting of Delegates, one from every local association. By their deliberations the Council is put in close touch with the work and wants of the metropolitan and country areas. The time will come when these delegates will more and more coincide with the Representatives of the parent Association and fulfil the same function. In England a member of the central Council has the right to be present and speak at a Representative Meeting, but has not the right to vote. It is an interesting point that recently I heard an able and prominent member of an active local association say, in all earnestness, that the reason of so many motions at the Annual Meeting of Delegates being lost was the fact that the members of the Council who were present voted *en bloc* against them. The real explanation was that most of the resolutions arose from local requirements, and however worthy of support from that point of view, were quite unsuitable when viewed from the standpoint of the other local associations.

The spontaneous expression of this country member, however untrue, shows quite clearly that we should adopt the rule of the parent Association and allow a member of the central Council to be present and speak, if necessary, at the Meeting of Delegates, but he should not vote.

This is another point in the similarity of the evolution of our Branch and its parent in England. While the parent Association has reached an almost ideal form of representative government on a numerical basis, we have still some considerable distance to go before such a desirable goal can be reached.

It must be remembered that it took seventy years for the profession to reach it in England. Let us hope that all of us here will live to see a form of government evolved that will be free from the criticism that is not truly representative.

The Council in New South Wales is still the supreme body, as it was in England before the adoption of the new constitution. So long as the Council is made up of men who have been through or who actually represent the whole range of medical practice, from lodge doctor to consultant, so long will the affairs of the profession be safe in their hands, but the aim we must have before us is that of true representative government.

From what has been said it will be seen that the great difference between the evolution of the parent Association and that of our Branch is that in the old country the progress of affairs was centripetal; here it has been centrifugal. Their organization spread from the country to the metropolis; ours from the metropolis to the country. This fact is indicative of the differences that exist between the old country organization and our own. In this land of great distances, while we may be able to retain the spirit of our parent Association, it is almost certain that we

will be unable to adhere to the letter. It is likely that in the near future the overseas Branches may be asked to take a greater measure of responsibility in self-government.

In the work of our Branch the burden of evolution has been borne chiefly by the Council. It is something more than the help of futile criticism that is wanted. Each local association, each member of that association, must add his quota for the common good. if we are ever to reach that goal of true democracy formulated by Abraham Lincoln: A government of the profession, for the profession, by the profession.

THE TOXIC ELEMENT IN GOITRE.

By **Sydney Pern, M.R.C.L. (Lond.), L.R.C.P. (Eng.),**
Melbourne.

The reading of books and work done on goître in other parts of the world, from an Australian, or shall I say a Victorian, point of view, is somewhat mystifying and apt to complicate still more this intricate subject. For instance, McCarrison's great work, in which he so skilfully traced out the causes and method of cure of goître in India, has no counterpart in Victoria, and the goître of Swiss valleys has no resemblance to that found in Gippsland. There is, however, one point in common, and here I am dealing with primary goître, and do not include goîtrous children born of goîtrous parents, which are occasionally seen here, as we must not loss sight of the fact that if a large portion of the thyroid of a healthy bitch in pup is removed, the pups will be born with goîtres. The point in common is "toxæmia."

Now there are many toxins which produce goître, or shall we put it the other way and say, that the thyroid hypertrophies if certain toxins are present, and such hypertrophy could reasonably be looked upon as a defensive process or an attempt to eliminate or destroy such toxins. Now why one person affected with a certain toxin should develope a thyroid enlargement and another with the same infection escapes, seems at first rather a hard question to answer. The thyroid has very complex duties to perform. Besides being interested in toxins, it also has a very important part to play in the calcium and iodine metabolism. It has been recently shown that iodine given by the mouth can be recovered in the thyroid. The calcium question in relation to goître has been dealt with at some length in previous articles of mine. If for some of these reasons the thyroid is not functioning properly, or the amount of toxin is too great to be normally dealt with, the thyroid hypertrophies. It may be stated that goîtres, often of very large size, which give rise to signs of hypothyroidism or no constitutional symptoms, have their iodine metabolism at fault. These are the prevailing type, as found in the limestone, mountainous districts of Switzerland. They are greatly benefited by the administration of iodine or thyro-iodine, the reduction of size being due to the emptying of the thyroid vesicles of their retained colloid, possibly by reducing its rigidity and allowing it to gain ready entrance to the circulation. Analysis has shown that the iodine content in these thyroids is very small.

The other type, in which the calcium metabolism is at fault, is found in Victoria, principally Gippsland, where goître is usually associated with signs of increased thyroid activity. These goîtres are benefited by the exhibition of calcium salts. Lime being deficient in the soil, the drinking of rainwater and the dislike to milk by the children who do so much milking, tends to lead to deficiency of calcium in their systems. Analysis shows that the iodine content is increased in these thyroids. The conclusions come to are therefore that:—

(*a*) if the toxin is too powerful to be dealt with normally, the thyroid hypertrophies,
(*b*) if the iodine content is low, as is found in the goître of Swiss valleys, and is associated with excess of calcium intake, and
(*c*) if the calcium intake is below normal,

provided that certain toxins are present, the thyroid hypertrophies.

In order to prove the toxin element of goître, 35 cases have been taken in sequence from my case-book, with rough notes giving the causes of the goître, as far as they could be found, and the results of treatment. There remains a certain number in which shock and fright play a predominant part; these cases are possibly of adrenal origin.

Since the repetition of many cases would be tedious, the following have been selected as typical examples:—

Cases.

1. February 16, 1915.—Miss V. G., *aet.* 18 years, had a medium-sized goître, with fairly marked thyrotoxic symptoms. There was slight anæmia and bad pyorrhœa. On February 24, 1915, she had all infected teeth removed. On June 3, 1915, all the thyrotoxic symptoms had disappeared. She was very well indeed. The goître was greatly reduced.

2. March 24, 1915.—Mrs. R., *aet.* 26 years, was suffering severely from Graves's disease. The symptoms were acute, and there was a marked goître. All the teeth were removed, although there was no pyorrhœa present, but an apical infection in nearly all the teeth. On August 20, 1915, the goître was gone, and the thyroid was barely palpable. The patient was quite well, except that she was more or less excitable. There was no tachycardia or other thyrotoxic symptoms and no exophthalmos.

3. March 15, 1915.—Miss B. P., *aet.* 19 years, had a large goître, with thyrotoxic symptoms. Her pulse-rate was 140. She made good improvement until September 1, 1915, when she caught a cold and thyrotoxic symptoms returned somewhat. She improved again, but did not get quite well. On April 12, 1916, her right tonsil was found to be enlarged and infected. It was subsequently removed, and within a few months the goître and all symptoms had gone.

4. March 16, 1915.—Miss W. R., *aet.* 19 years, had a markedly noticeable but not very large goître. Her pulse-rate was 80. There were no thyrotoxic symptoms, and no septic focus was found. On May 26, 1916, the thyroid was just noticeable, and the patient's health was quite good.

5. April 27, 1915.—Miss E., *aet.* 28 years, had very marked symptoms of Graves's disease. On August 19, 1915, her tonsils were removed. On October 25, 1915, she was quite well. No goître was visible, but the eyes were a little prominent.

6. April 28, 1915.—Mrs. R., *aet.* 23 years, had a small goître, exophthalmos and thyrotoxic symptoms. Her teeth were attended to, the majority having to be removed. On January 1, 1915, she was very well. There were no thyrotoxic symptoms, and the thyroid was of normal size.

7. August 5, 1915.—Miss R. W., *aet.* 16 years, was suffering

from a goitre with no thyrotoxic symptoms. No septic focus was found. On August 26, 1915, the thyroid was just palpable.

8. May 19, 1915.—Miss M., *aet.* 11 years, had a goitre, but no thyrotoxic symptoms. Treatment was tried without much benefit. On June 17, 1915, she had her tonsils removed. On September 2, 1915, the goitre was reduced to half its former size, and was still becoming smaller.

9. May 25, 1915.—Miss H., *aet.* 25 years, had a goitre with marked thyrotoxic symptoms. On June 7, 1915, she had her tonsils removed. On June 30, 1915, her weight was eight stone. On January 1, 1916, she was quite well; her weight was 9 stone 8 lbs. There was no thyroid enlargement. On June 14, 1917, the patient was very thyrotoxic. Her weight was 8 stone 4½ lbs. A septic stump of the tonsil was removed. On October 11, 1917, she weighed 9 stone, and was quite well.

10. June 7, 1915.—Miss M. I., *aet.* 26 years, had been suffering from Graves's disease for some years. Her pulse-rate was 130. There was a yellow mucus down the back of the throat. She had been treated unsuccessfully for a nasal condition. Under treatment she improved as regards her goitre till the end of September, when she developed a cold, and a recurrence of symptoms resulted. On October 11, 1915, she was again improving. On January 4, 1916, she had her tonsils removed. Her nose was operated on on March 1, 1916. She gained 2 lbs. in weight. Her nose was still discharging. On March 16 her ethmoidal cells were cleared out. She has gained 4½ lbs. since January 4, 1916. On January 26, 1916, her nose was still discharging. On May 15 an abscess at the root of her teeth developed. She was advised to have many bad teeth removed, but she refused to submit. On June 15, 1916, she decided to have part of her thyroid removed, as the thyrotoxic symptoms were still present. Much time was wasted in ineffectual treatment of multiple septic foci.

11. July 23, 1915.—Mrs. B., *aet.* 30 years, had thyrotoxic symptoms, but her thyroid was not noticeably enlarged. Her pulse-rate was 140. She had had treatment up to August 24, 1915, and then decided to have her septic teeth removed. On September 29, 1915, all her thyrotoxic symptoms had disappeared. Her pulse-rate was 76. On October 25, 1915, her health was very good, and she had no nervous feelings.

12. September 16, 1915.—Mrs. W., *aet.* 34 years, gave a history of having suffered for three years from severe Graves's disease. Her pulse-rate was 150. She had distinct pyorrhœa and crusts in her nose. Her weight was 8 stone 7½ lbs. On October 18, 1915, treatment with a mixed autogenous vaccine was begun. On November 30, 1915, she weighed 9 stone 1 lb. She was doing well in the early part of January. On the 24th she had her tonsil removed, which was found to be infected, though not much enlarged. She lost a great deal of blood. On March 1, 1916, she was improving satisfactorily. A fortnight later she was very well. She went home, but caught diphtheria, and developed acute nephritis. She returned in January, 1917, with recurrence of her goitre symptoms. Her urine became almost solid with albumin on boiling. She passed 670 c.cm. in 24 hours. Her blood pressure was 200 mm. of Hg.. Her kidneys were decapsulated. She improved steadily, but was still somewhat thyrotoxic. Her goitre became very small, and no septic focus was found. Some slight signs were detected at the right apex suspicious of early tubercular involvement.

13. September 30, 1916.—Mrs. B., *aet.* 28 years, had a very large goitre, measuring 47.5 cm. There were no thyrotoxic symptoms. The goitre became reduced considerably under treatment. On March 6, 1916, her left tonsil was found to be infected, and was removed. She wrote on August 7, 1917, to the effect that she could wear a 36.35 cm. (14½ in.) collar with comfort, and that her goitre was almost gone.

14. October 6, 1915.—Miss Y., *aet.* 32 years, had noticed a swelling of the neck nine months before. It had been getting bigger. She complained of headaches and palpitation, and was very nervous and mildly thyrotoxic. There was an adenoma in the right lobe of the thyroid, which was generally enlarged. On November 1, 1915, the thyroid was subsiding and the adenoma was showing up more distinctly. On February 18, 1916, only the adenoma was palpable.

15. November 3, 1915.—Miss G., *aet.* 14 years, had had a goitre for four months. She was nervous. Her pulse-rate was 120. She had nasal trouble, which was receiving attention. A discharge was still present. On December 30, 1915, she had her turbinated bone removed, to allow of free drainage. On February 17, 1916, the goitre was not visible, but was just palpable. Her condition was greatly improved. On April 13, 1916, the discharge was as bad as ever. She was otherwise well. On June 9, 1916, the discharge was plentiful, but she was free from thyrotoxic symptoms. The thyroid was only palpable.

16. December 1, 1915.—Miss H., *aet.* 21 years, had been suffering from severe Graves's disease for two years. She had been under treatment for two months, and was greatly improved. A septic tonsil was removed. Her thyroid did not show any enlargement. On December 20, 1915, the other tonsil was removed. She still complained of severe headaches. On March 1, 1916, the sub-mucous removal of the septum was undertaken. She was much improved, on April 17, 1917, but she still suffered from headaches. She left for home.

17. December 12, 1915.—Mrs. F., *aet.* 27 years, had had diphtheria three years before. Her goitre had become noticeable soon after. It had been getting bigger during the last few months, with the usual thyrotoxic symptoms. Her pulse-rate was 112. Her tonsils were badly infected. On April 17, 1916, she returned for treatment, and had her tonsils removed. She improved steadily. By March 21, 1917, she had lost all her thyrotoxic symptoms. There was still some thyroid enlargement. She wrote later that it had become still further reduced.

18. December 15, 1915.—Miss F. B., *aet.* 23 years, had noticed a swelling of her thyroid for the last four months. The usual thyrotoxic symptoms were present. There was a history of nasal discharge and infected tonsils. On December 22, 1915, one tonsil was removed, and on January 18, 1916, the other tonsil was removed. On February 15, 1916, her nose was operated on. On May 25, 1916, her nose was still discharging freely. It was decided to put off further treatment till the nose had been put right.

19. December 17, 1915.—Mrs. B., *aet.* 39 years, complained of a swelling of the thyroid for five months. The usual thyrotoxic symptoms were present. She had lost one stone. Her husband had gone to the front, which had upset her greatly. She improved on treatment. On January 26, 1916, three septic teeth were removed. On March 16, 1916, she was quite well.

20. January 9, 1916.—Mr. H. C., *aet.* 14 years, had noticed a swelling of the neck a few weeks before. It had probably been there longer. There were no symptoms. The tonsils were bad, and were removed. On June 8, 1916, his goitre was hardly noticeable. He was quite well.

21. January 11, 1916.—Miss P., *aet.* 28 years, had been operated on two years before for exophthalmic goitre. She had improved, but lately was getting worse. The exophthalmos and usual symptoms returned. The right side of the thyroid had been removed. The left half was still fairly large. There was nasal obstruction, and the tonsils were infected. On February 1, 1916, she had her septum removed. On March 16, 1916, she had her tonsils removed and uterus curetted. She improved, and left for England.

22. January 28, 1916.—Miss C., *aet.* 21 years, had had a swelling of the neck for two years. She complained of headaches. She had been taking thyroid extract. She had lost weight, and was very nervous, but not markedly thyrotoxic. She had had her tonsils partially removed a year before. The right tonsil was very septic, and the left tonsil was also infected. There were a few crepitations at the apex of right lung. On February 18, 1916, her septum was removed. On the 29th the goitre was hardly palpable. On July 17, 1917, her tonsils were removed. They were very large. She was quite normal on September 11, 1917.

23. March 7, 1916.—Miss L., *aet.* 38 years, was very nervous and thin. She had exophthalmos and the usual thyrotoxic symptoms. There was a muco-purulent discharge from the nose, and the tonsils were septic. On April 14, 1916, she had her tonsils removed. On June 20, 1916, there was a marked improvement. On August 4 she was getting quite fat, and on November 4 she was quite well. A year later, on October 12, 1917, she was losing weight again. There were signs suspicious of early tuberculosis in the right apex, with a few occasional crepitations and increased vocal fremitus. There was some pyorrhœa of the front teeth. She was placed under treatment again.

24. April 4, 1916.—Miss R. J., *aet.* 20 years, had noticed a swelling in her neck for four months. She complained of headaches, palpitation and tachycardia. She had had tonsilitis two years before (a bad attack). There was a medium-sized goitre. On April 26, 1916, she had her tonsils removed. On June 13, 1916, her thyroid could hardly be felt. On August 15, 1916, she was quite well.

25. April 12, 1916.—Miss T., *aet.* 23 years, had a large goitre and septic tonsils. She was thyrotoxic. She had her tonsils removed. On the 26th the goitre was much smaller and softer. On May 7, 1916, it was nearly gone. On August 23, 1916, there was very little enlargement of the thyroid.

26. May 15, 1916.—Miss B., *aet.* 30 years, had first noticed a tired feeling and headaches and slight palpitation 2½ years before. She noticed that her neck was getting larger two years before. She was mildly thyrotoxic. Her eyes were somewhat prominent; her pulse was quiet. The goitre was small. She had septic tonsils. On August 23, 1916, her tonsils were removed. She was weak after the tonsillotomy, at which she had bled freely, a week later. On September 4, 1916, there was a very great improvement. On the 11th she was perfectly well, except that her eyes showed a very little prominence.

27. June 10, 1916.—Miss R., *aet.* 21 years, had noticed an enlargement of neck five years before. She had only felt it for the last three months. She had a good deal of throbbing of the neck, which kept her awake at night. She tired very easily, and was nervous. Her pulse-rate was 104. When she caught colds her throat was always sore. Her tonsils were slightly infected. Her teeth were good. Her nose was suspicious. The thyroid was slightly enlarged, but the heart was sound. On June 27, 1916, she had her tonsils removed. On July 11, 1917, there was a great improvement. A week later no thyroid enlargement could be felt. On August 29, 1916, she was much fatter, and was quite well.

28. June 22, 1916.—Miss H., *aet.* 43 years, had first noticed that she was not well eleven months before. She had been very worried about her eyesight failing. She had noticed a swelling of her neck eight months before. The swelling varied considerably in size. Her digestion was bad. Her teeth were very septic. Her urine was normal. There were signs of mitral incompetence. She suffered from bad heart attacks, with many extra systoles. Her pulse-rate was 100. On June 30, 1916, she had some teeth taken out. On July 14, 1916, there was a definite improvement. A fortnight later she was not feeling so well, but her thyroid was smaller. No murmurs were heard over the cardiac orifices. On August 4, 1916, she was much better. Her pulse-rate was 80. There was a great improvement by August 25, and by October 16 the goitre was almost gone. On March 23, 1917, she was doing splendidly, but on May 23, 1917, her heart began worrying her again. On July 13, 1917, a sinus infection in the superior maxilla was cleared up. There was a general improvement by August 30, 1917. The goitre swelled up a little occasionally.

29. August 2, 1916.—Miss A. S., *aet.* 26 years, had had a swelling in her throat for some years. For the last twelve months she felt tired and weary, and got palpitation and the usual run of thyrotoxic symptoms. Her periods were irregular. She had her tonsils and some post-nasal growths removed two years before. She had had rheumatism. The tonsil stumps were very septic. There was a fairly large goitre. The pulse-rate was 140. On August 29, 1916, her tonsils were enucleated. On September 12, 1916, the size of her neck had become reduced. There was a steady improvement during September. On October 20, 1916, she was much better and fatter, and on the 31st her goitre was nearly gone. By December 11, 1916, her goitre was quite gone. The thyroid gland could hardly be felt.

30. August 16, 1916.—Mrs. M., *aet.* 27 years, had noticed an enlargement of the neck three years before. Her nerves were very bad. She complained of palpitation and headaches, and tired very quickly. Her tonsils and teeth were good, No definite septic focus was found. She was put under treatment. On November 27, 1916, she was quite well.

31. August 31, 1916.—Miss W., *aet.* 18 years, had had a very large goitre for at least four or five years. The neck measured 39.4 cm. Several of her brothers and sisters had goitre and thyrotoxic symptoms. There were signs of hypothyroidism. Thymol had no effect. Her tonsils were very septic. They were removed. Calcium lactate and *fel porci* were tried, but had no effect. The thyroid gland was reduced to 38.9 cm., and became much softer under treatment with thyroid extract. Treatment with X-rays for six weeks did not produce any beneficial result.

32. August 1, 1916.—Mrs. S., *aet.* 50 years, had had a goitre for 14 years. She had always been nervous and liable to headaches. She had been in very bad health for the last twelve months, and had lost weight lately. Her heart was slightly dilated, but there were no murmurs. Her pulse-rate was 132. Her teeth were very bad. She had pyorrhœa. The goitre was very hard, (?) adenomatous. On September 11, 1916, she had her teeth out. She was feeling better. Her weight was 7 stone 9½ lbs. On October 19, 1917, her health was much better. On the 26th the goitre was a little smaller. It fluctuated in size. On November 16, 1916, her pulse-rate was 84 and her weight 8 stone 2 lbs. She was much better, but the goitre was the same. She was keeping very well during the latter part of November. On February 19, 1917, she was quite well. There was no change in the adenoma. On June 17, 1917, her health was very good. The goitre was still hard. No further alteration took place.

33. September 6, 1916.—Miss S., *aet.* 26 years, had noticed a swelling in the neck for four years. It had never given her any trouble, except when she was tired. There were no thyrotoxic symptoms. There was a history of goitre on her father's side of the family, affecting her father, uncle and two aunts. Her tonsil was infected. On September 19, 1916, she had the tonsil removed. On October 6, 1916, the goitre was much softer, and on October 30 it was still softer and smaller. On November 23, 1916, the goitre had been almost impalpable for the last four days, but had increased in size again. There was no distinct alteration in the following week, during which she used thyroid extract. A good deal of reduction in size of the goitre was noted on January 12, 1917, and ten days later the gland was much smaller, but was still a little enlarged.

34. September 18, 1916.—Mrs. R. M., *aet.* 28 years, had noticed a goitre for six years. Four years before she had had treatment for two years with X-rays. She had had no treatment for the last two years. She tired easily, was nervous and had palpitation. Her pulse-rate was 132. Her tonsils were very septic, and her teeth very bad. On September 28, 1916, she had both tonsils removed. She went home, to come back later for treatment. On March 1, 1917, she had had all her teeth out. She had had an attack of subacute rheumatism. In the interval, the goitre had become reduced considerably. The pulse-rate was 128, but it rose to 136 by March 12. On April 27, 1917, it had dropped to 114. The patient was getting quite fat. She complained of painful masses of fat behind the right knee and over her ankles. This suggested some pituitary deficiency—*adiposa dolorosa*. She returned home with her general health greatly improved. There was still some tachycardia, and a little exophthalmos. On January 1, 1918, she wrote that she was in excellent health; better than she had been for years.

35. December 8, 1915.—Miss E. G., *aet.* 16 years, had noticed a goitre 18 months before. There were no symptoms to complain of. There was a fairly large goitre. Her pulse-rate was 108. On December 18, 1916, she had her tonsils removed. The size of the goitre was decreasing on January 2, 1917. By January 23 there was a very great improvement. She went away for three months. On April 10, 1917, she returned for renewed treatment. On August 18, 1917, there was much further reduction in the size of the goitre. Later she wrote that it was barely noticeable.

Reports of Cases.

THE BROKEN HILL EPIDEMIC.

By **Glen H. Burnell, M.B., B.S. (Adel.),**
House Surgeon, Broken Hill Hospital.

On 25th August, 1917, I published in the *Journal* an account of an epidemic at Broken Hill of what is now called the "X" disease. I described the features of a typical case in some detail. As the disease has recurred but has fea-

Figure I.
shows round-celled exudation around capillary vessels; also shows that many of the large nerve cells are intact, only a few being attacked.

Figure II.
Cervical Cord, showing inflammatory reaction, but in a lesser degree than either the lumbar cord or medulla,

Figure III.
Medulla, showing round-celled exudation around a small capillary.

tures a little different to the cases of 1917, it may be of interest to point out the changes we have noted.

There have been 19 cases admitted to the Hospital this year, with 17 deaths, and three of the cases were in females. The ages range from 2 to 65. I described last year a peculiar mental condition. This has not been so evident this year as the patients pass more quickly into the comatose condition. On the other hand twitchings of the limbs are more common, while in several cases there has been noted a tonic spasm involving one side of the body, giving place, after a while, to a similar spasm of the other side.

The reaction of the pupils to light is not constantly present. Strabismus has been present in three cases of the series. The reflexes are often lost a short time before death. Difficulty in swallowing remains a very constant symptom. The leucocytes have ranged from 30,000 to 50,000 per c.mm., but the count often falls to 5,000 within 24 hours of death.

Lumbar puncture gives clear fluid nearly always under slightly increased pressure. It usually contains an excess of small lymphocytes. This was not the case last year.

Thirteen post-mortem examinations have been made with the following results. In one case there was a large basal pneumonia on left side. In two cases blood-stained fluid was found in the left pleural cavity. In two cases there was some injection of the stomach and duodenum, with scattered patches of petechial hæmorrhages in the mucosa. In about half the cases there was definite œdema of the brain. In all cases there was some degree of hyperæmia of the pia-arachnoid. In no case was this excesive, but was more marked in some cases. Sections of cord, medulla, and various parts of cerebrum and cerebellum have been made in eight cases, and these confirm the theory suggested simultaneously last year by Drs. Cleland and Bradley, working together, and Dr. Breinl, *i.e.*, that it is a form of poliomyelitis or else a very closely allied disease.

Figure IV.
Lumbar Cord.

The changes extend from the medulla to the lumbar region of the cord, and consist of marked capillary engorgement, small round-celled infiltration affecting chiefly the grey matter but not confined to it.

Some large ganglionic nerve cells are attacked, but many appear normal.

Numerous capillary hæmorrhages are present, and blocking of the central canal of the cord with cellular detritus.

Similar changes were observed in the brain, but were not so extensive or severe as those in the upper part of the cord.

In the earlier cases of the series these changes were most marked in the region between the medulla and dorsal cord, but in the last case it was found that the process was more extensive, involving the whole cord, medulla and pons.

Figures I. and IV. show the appearance of the lumbar cord. Figure II. that of the cervical cord, and Figure III. that of the medulla, the latter being taken from the region immediately under the floor of the fourth ventricle at the level of the middle of the olivary nucleus. The inflammatory changes in this case were most severe in the medulla and lumbar enlargement, in the latter place the hæmorrhages being more than microscopic, having indeed progressed to such an extent as to lead to a "ploughing up" of the lumbar enlargement, and filling of the spinal canal with blood. This was the only case to exhibit a permanent paraplegia as opposed to the evanescent paralyses of other cases, but this can be attribhted to the pressure of the effused blood, and not to the inflammatory change *per se*.

Somewhat similar conditions were observed in the kidney, *i.e.*, capillary engorgement and numerous small hæmorrhages, especially in the region of the collecting tubules. Sections of the liver and spleen did not show anything abnormal.

The histological picture then shows an acute blood-borne infection of the whole cerebro-spinal tract, but more severe below the level of the pons varolii.

The small Gram-negative bacillus which occurred so frequently last year, has not been found in any of the cases this year. Cultures of the blood and spinal fluid, both aerobic and anaerobic, have been made in five cases, all being sterile. The organism has never appeared in any other cultures during the year, and this fact points towards it being a secondary infection rather than a contamination of media.

The serum treatment, which promised well last year, we have not been able to try, except in one case, as the bulk of the serum deteriorated during the hot weather. Dr. Birks, the Superintendent, gave the remainder of the serum to a child who was moribund, giving 15 c.cm. the day after admission and 10 c.cm. the following day. He reports that the child showed very marked improvement after the first injection, but relapsed and failed to respond to the second one.

As the only two patients to recover are the last two admitted, we have been unable to obtain any serum this year from convalescent patients. but on the suggestion of the Superintendent, Dr. Birks, we have tried injecting normal human serum instead, obtaining this blood from the mothers of the patients, working on the theory that as females are so rarely affected, their immunity is for some reason or other higher than that of males. Five patients out of the last seven admitted have been so treated, and of these two have recovered. Doses varying from 30 to 60 c.cm. have been injected subcutaneously daily for three or four days. Probably much larger doses can be used with benefit. We propose to continue this treatment until such time as we can obtain an immune serum from convalescent patients.

The sections were stained by Nissl's method for chromatic granules.

It has been announced that the Minister of Public Health of New South Wales has commissioned Mr. Neville Mayman, a Member of the Benevolent Society of New South Wales, to visit New Zealand and to enquire into, and report upon, the methods employed in the endeavour to reduce infantile mortality. Dr. Truby King's excellent work and the New Zealand arrangements in regard to infant care are certainly worthy of very careful study. It is, however, an unjustifiable waste of public money to commission anyone, save an expert, to carry out an investigation of this character. A complex subject like the hygiene of infant life cannot be studied with advantage, unless the investigator is able to base his critical observation on years of experience and on an intimate knowledge of the processes involved. It would have been economical to have engaged a physician who had made a study of the care of infants and of children's diseases, to carry out this investigation.

The Medical Journal of Australia.

SATURDAY, APRIL 6, 1918.

Loyalty to Empire.

Thousands of miles divide us from the scene of the awful tragedy of the second Battle of the Somme. We have known for years that each part of the great British Empire had a sacred duty to perform in supplying every available man to face a foe, trained like a machine to fight ruthlessly, bitterly, with every conceivable devillish device and with a pertinacity almost without equal. Australia has failed in her duty and her brave sons who are shedding their blood in the cause of Empire, look in vain for the reinforcements that never come. The duty unperformed lies lightly on too many healthy, physically fit young men in our cities and on the land. They have been asked to go and have refused. The medical profession put the same question to themselves, and the vast majority of its members replied like men. Even if the others have failed, the medical practitioners of this corner of the Empire cannot stand aloof at this time when the call is being distinctly heard from across the ocean.

In New Zealand the medical profession proferred its services for any duty to be performed either at home or abroad. They planned a scheme by means of which the right man would be used in the right place. A medical board was proposed, which would have inspired the confidence of the members, and which would have prevented the infliction of individual hardship. Unfortunately the Minister in whose power the primary acceptance of the loyal offer lay, desired to subject the profession to the control of a Governmental Department, and when he learned that the services of the whole profession would be available only to the military and not to the civil authority, the Bill for the conscription of the medical profession was temporarily laid aside. We learn from the latest report of the Medical Advisory Board that the offer still holds good, and that the profession is ready at any moment to be mobilized for war purposes. Why cannot the same be done in Australia?

The Chairman of the Federal Committee of the British Medical Association in Australia has been authorized to inform the Minister for Defence that no less than 1011 members of the medical profession in the Commonwealth had voluntarily expressed their willingness to have the whole profession enrolled for enlistment in the Australian Army Medical Corps. Apparently no use is to be made of this information. Something more must therefore be done. Dr. Edgecumb Short has made a practical suggestion. It is in effect that the 1011 men who voted in the affirmative at the medical referendum, should place their services unreservedly at the disposal of the military authority. Before this offer could be made, it would be necessary to establish a medical board which would enjoy the full confidence of the medical profession. This medical board should be endowed with power to select practitioners for any military service that needed performance. This board would arrange for the relief of those who had been serving for two or three years at the seat of war. It would select suitable men for field work, others for base hospital work in France, England or elsewhere. It would distribute the work of examining recruits in Australia, and would order medical officers to take on duty for limited periods at the various training camps in Australia. Should it become necessary, the board might be required to mobilize practitioners for civil work in districts that had become depleted of doctors. The basis of the enrolment would be voluntary, but we feel convinced that if the 1011 men who voted "Yes" joined in a body, others would not be slow in following suit. There is urgency in the face of the recent events in France. We appeal to the six Branches of the British Medical Association to invite their members to send in their names without delay. We would suggest that the official establishment of a medical board be sought if 1000 members of the profession intimate their readiness to submit to a voluntary enrolment for service in the Australian Army Medical Corps, both at home and abroad.

LODGE PRACTICE AND ITS ALTERNATIVES.

At a largely attended meeting of the Victorian Branch, held on March 22, 1918, Dr. W. R. Boyd gave an excellent survey of the recent events in the dispute between the agitators controlling the Friendly Societies' Association and the Victorian Branch of the British Medical Association. The Council of the Branch regarded the situation seriously. As the persons purporting to represent the friendly societies showed no disposition to accept the conditions under which the medical profession was prepared to give its services, they have proposed an alternative method of according medical attendance to the wage-earners at a rate of remuneration within the reach of all. In the large gathering there was a noisy minority. From the report of the meeting published in our issue of last week, the impression may be gained that the opposition to the Council is a powerful one. The voting in favour of the Council's motion and against the subsequent motion to bid the Council desist from introducing a scheme of direct contract practice, reveals that the opposition is numerically weak. Moreover, it would appear as if only a small portion of this small minority was opposed to the proposal that the medical profession should rid itself once and for all time of the friendly societies and make its own arrangements with the wage-earners. More than that; we gather from the arguments used by these men that no one was opposed to the proposition in principle, but that the opposition to the scheme depended on a fear that it would be impracticable and on a fear that it had not yet been worked out in sufficient detail to justify its adoption.

Many medical practitioners object to all forms of contract practice. This objection is well founded. It is, however, generally recognized that there are also valid objections to all the alternatives which have yet been devised. As a rule the man who is loudest in his damnation of contract practice, is the man who has a lucrative private practice and only comes in contact with the less well-to-do section of the community in hospitals. Dr. Jona resurrects the time-worn suggestion of relinquishing all forms of contract practice in favour of low fees and reduced bills. It should not be forgotten that contract practice was introduced to give the small wage-earner a feeling of security in regard to the expense of illness. Before contract practice existed, the poor either crippled themselves to pay the doctor's bill, or accepted the attendance as charity, or owed their medical attendant varying sums of money or went without medical attendance altogether. Moreover, this haphazard method involved the risk of a two-fold abuse. Persons who could well afford to pay full fees, took advantage of a good-natured practitioner and laughed up their sleeve when he was foolish enough to believe their stories of limited means. The astute medical practitioner used to attract many patients from his colleagues by deliberately cultivating the reputation of accepting low fees. The main objection, however, is that this want of provision always ends in the patient and the doctor becoming strangers.

Another alternative of lodge practice is that favoured by the *Age*, and a few organizations whose aim is social revolution. It is known as nationalization of medicine. The proposal to establish a State service of salaried medical officers who would accord medical attendance to every member of the community who chose to claim it, has so many evident defects and dangers that no responsible ministry would introduce it. We have dealt with some of its defects in a recent issue. On the other hand the voluntary co-operation of general practitioners with a well-organized service of preventive medicine, appears to us to be highly desirable and eminently practicable. The next alternative would be national insurance. A close study of the schemes of national insurance in existence will reveal that this is an excellent expedient to overcome pauperism. The community pays much more for its medical service in England under the National Insurance Act than the medical profession in Victoria is demanding and the man earning more than a relatively low income, is excluded from its benefits. In other words national insurance would suit the medical profession of Victoria very well at present, but its introduction would be somewhat costly to the community, since the evil it is able to remove is non-existent in Australia. The fourth alternative to lodge practice is admittedly a bad one. It is the establishment of medical institutes with salaried medical officers. The patients do not

get a fair deal, the medical officers are required to work under the worst possible conditions, and practitioners of high professional standing refuse to participate. It has been proposed that each medical practitioner should be allowed to make a contract with the wage-earners who desire to secure his services. Unless canvassing for patients were introduced, and the ethics of the medical profession forbid this, there are almost as many disadvantages to this proposal as there are to the proposal that contract practice should be abolished altogether. On the other hand there is no conceivable objection to the establishment of a medical benefit society, organized by the profession, managed under its auspices and subject to its ethical rules. This is the direct contract scheme of the Victorian Branch. This plan has been carried out with conspicuous success in many parts of the Empire. The members who hesitated before approving the proposal of the Victorian Branch Council to proceed with the establishment of such a scheme, shied at a shadow. They wanted minute details when general principles that have been tested and found to be sound, were offered. They looked for guarantees, when a moment's thought must have told them that no reform has ever been introduced with the safeguard they were seeking. Care in the choice of a manager, universal confidence in the Council, and a strong determination to make the scheme a success are necessary at this stage. The Council of the Victorian Branch will, no doubt, take steps to assure the members that direct contract is a real solution of the present difficulty. There is nothing impracticable or preposterous about it. It would be a means of ridding the profession of the oppression of the political agitators who control the friendly societies.

THE PROPHYLAXIS AND TREATMENT OF TETANUS.

Although the study of the bacteriology of tetanus date back over three decades and twenty-eight years have passed since tetanus toxin was isolated, and twenty-four years since tetanus antitoxin was introduced, so much difference of opinion concerning prophylaxis and therapeusis of this condition still existed in the early days of the war that the British Government commissioned General Sir David Bruce, C.B., F.R.S., in November, 1914, to undertake a special investigation of the subject of tetanus, its causation and cure. Sir David Bruce has dealt with the results of his ingenious studies in his Presidential Address to the Society of Tropical Medicine and Hygiene.[1] The work is of first class excellence, and deserves the attention of all those interested in this disastrous disease. An additional value attaches to the publication, inasmuch as a highly important discussion followed the delivery of the Address. The surprising thing about the Address and the debate is that all these war-time investigators appear to have forgotten the mass of scientific work that has been carried out during the past twenty years, and that they have been influenced by the impressions of clinicians concerning the value of the antitoxin in preventing the disease or in curing it. From Sir David Bruce's data, it would appear that the incidence of tetanus in the war is not yet ascertainable. He has studied the records of one thousand cases in England, including 99 cases of local tetanus without trismus. He appears to have reason to estimate that during the years 1915 to 1917, inclusive, approximately one in each thousand wounded men developed tetanus after returning to England. He guesses roughly that the true incidence of tetanus in France must have been about one case in each five hundred wounded men. The evidence afforded by his records leads him to conclude that prophylactic treatment with antitoxin lengthened the incubation period and decreased the mortality. He has no direct evidence of the prophylactic value of antitoxin. He can discover no evident advantage in the early application of antitoxin as compared with two or more days after the wounding. His figures rather indicate that late prophylactic injections yield better results. This appears to him to be absurd. It takes several hours for tetanus bacilli to establish themselves in a wound. After they have gained a foot-hold, they have to multiply. Toxin is liberated later, and carried to the central nervous system at a slow rate. It would seem to us that the best time for neutralizing the toxin would be after the establishment of the bacteria.

In the next place he deals with the results of treatment. The mortality is lowest after intramuscular injection, and highest after subcutaneous and intrathecal injection. He admits that no useful deductions can be arrived at from his figures. Professor Sherrington records very briefly some experiments on monkeys, which go to show that a dose equal to eight times the minimal lethal dose is overcome by antitoxin more frequently when the antitoxin is applied into the bulbar subdural space. The antitoxin appears to have been given from two to four days after the toxin, but the dose is not mentioned.

In the course of the discussion Captain F. Golla points out that local tetanus is the product of the prophylactic application of antitoxin. He has also shown that the prophylactic use of antitoxin has reduced the percentage of cases with short incubations periods to a great extent and co-incidently has reduced the mortality. Captain Tulloch records that he had been working with a serum which agglutinated eight laboratory strains of *bacillus tetani*, and one strain derived from a battle wound. It failed to

[1] *Transact. Soc. Tropical Med. and Hygiene*, November, 1917.

agglutinate five other battle wound strains. An animal was inoculated with one of these five strains, and the serum obtained agglutinated three strains which his original serum failed to agglutinate. From these and similar experiences, he deduces that the tetanus bacillus is not an individual organism, but is really a group of organisms, each of which is endowed with the power of liberating a tetanus toxin.

In order to understand the contradictory estimates of the clinical value of tetanus antitoxin, it is advisable to refer to some of the facts which have been elucidated about the toxin many years ago. In the first place Wassermann and Takaki found in 1898 that if tetanus toxin and guineapig's brain were mixed thoroughly, the mixture containing many times the minimum lethal dose of toxin, failed to produce any toxic symptoms. It was further found that spinal cord absorbed the toxin with less avidity and held it less securely than brain. Ransom and others demonstrated that tetanus toxin was anchored by cerebral substance during life. It was shown that the affinity for tetanus toxin varied according to the species of animal. Wassermann found that an emulsion of the brain of guineapigs was able under favourable conditions, to prevent the appearance of toxic symptoms after intoxication with tetanus toxin. It is unnecessary for our present purpose to follow the investigations undertaken with the view to determining the form of receptors which attach the tetanus to the brain on the one hand, and to antitoxin on the other. Suffice it to recall that when tetanus toxin and antitoxin have been in contact for a sufficiently long time for the anchoring to become complete, the brain substance is no longer capable of attracting or binding the toxin. It has been shown by von Behring that the combination of toxin and antitoxin in the blood stream takes place less readily than it does in the test-tube. All investigators agree that once the antitoxin has become attached to the brain substance, either in the living animal or in the test tube, antitoxin is incapable of effecting a separation, and a new combination with itself.

Sir David Bruce is unable to supply direct evidence of the prophylactic value of tetanus antitoxin, but his indirect evidence is extremely strong. The literature contains much direct evidence. It is quite possible that the reason why the prophylactic power is not stronger, or rather why it fails in many cases, is that supplied by Captain Tulloch. If tetanus bacilli vary according to the strains, as indeed the majority of other pathogenic bacteria have been shown to vary, there would be no difficulty in understanding why the protective power of an injection within a few days of the wounding may fail to prevent symptoms. From von Behring we have learnt that an efficient antitoxin injection must contain a large excess of antitoxic units. Since it is impossible to anticipate the amount of toxin which may generate from any given wound, it follows that its efficacy must depend partly on the size of the individual doses, partly on the reaction of the serum, and partly on the strain of bacilli from which the serum has been prepared. The serum contains an inhibitory substance, which tends to interfere with the toxin-antitoxin reaction. It is not improbable that this inhibitory action of the serum may become stimulated by repeated injections of antitoxin, and consequently the importance of giving single large doses, rather than repeated smaller doses, is manifest. Sir David Bruce shows that repeated prophylactic doses actually protect less well than single doses.

In regard to the curative action of antitoxin the literature contains an overwhelming amount of information. It is quite evident from the data supplied by Kanthack and by many other observers following him that the curative value of antitoxin after the disease is manifest, is nil. The only action of the antitoxin under the circumstances, will be to prevent any free toxin from attaching itself to the brain substance. In cases with short incubation periods, the lethal dose is attached to the brain long before antitoxin can be applied. In cases with prolonged incubation periods, it is doubtful whether a lethal dose is attached to the brain at all. In any case a considerable percentage of patients recover from tetanus, when the disease has been several weeks in developing. Professor Sherrington's experiments have little practical significance. The monkeys were not infected; they were merely poisoned with a lethal dose of toxin. The full amount of toxin had not reached the brain when the antitoxin was introduced. In some cases the antitoxin was able to neutralize the excess of toxin, and thus to convert a lethal into a sublethal dose. Once this was effected, the danger to the monkey was over. The conditions are incomparable to those present in an infection with a constant supply of toxin slowly passing into the blood stream, and thence to the central nervous system. A careful study of the claims of clinicians who advocate the intracerebral exhibition of tetanus antitoxin, leads us to the conclusion that far from this therapy being of value, it is not unlikely to lessen the chances of recovery of the patient.

LUNG MEASUREMENTS.

The study of the composition of the breath of living persons has been pursued with much ardour during the last quarter of a century. The results of these investigations have made clear the conditions under which estimations of the several components of the breath afford information of the quantity of these substances in the arterial blood and in the venous blood in the lungs. If a further analysis of the gaseous exchange is attempted in the living subject, it appears necessary to obtain more accurate knowledge of the volume of the air-space in the lungs. Hutchinson, in 1846, called the amount of air that a person can expire after a maximal inspiration the "vital capacity." Sir Humphry Davy, in 1800, correctly measured the amount of air remaining in the lungs after a maximal expiration and named this quantity the "residual air." The sum of the figures for the "vital capacity" and the "residual air" gives the figure for the "total lung volume" or "total capacity." The amount of air present in the lungs when the breath is held by a resting person half-way between inspiration and expiration, constitutes the

"middle capacity." The difference between the "total capacity" and the "middle capacity" is the "reserve air," and that between the "residual air" and the "middle capacity" is known as the "complementary air." During rest a person utilizes about 250 c.cm reserve air and 250 c.cm complementary air in normal breathing. Systematic measurements[1] of these quantities in healthy men and women have been recently carried out by C. Lungsgaard and D. D. van Slyke at the Rockefeller Institute of Medical Research, New York. These investigators estimate the vital capacity by expiration into a spirometer. Some variations are observed in different estimations, and these are shown to be due to differences in the final point of expiration. The residual air is determined by the dilution method employed by Davy over a century ago. The total lung volume is determined in a similar manner, and this result utilized as a check on the figures obtained by the other methods of measurement. The middle capacity is measured with a spirometer, holding four litres of a mixture of equal parts of oxygen and nitrogen, into which the subject breathes to and fro, while the dials are read. The results obtained with eighteen healthy adults, give for men, in the standing position, the averaged volume of the residual air as 1.5 litres, of reserve air as 2 litres, and of complementary air as 2.5 litres, and of total lung volume as 6 litres. Women show a diminution of half a litre in the volume of each kind of air, and a lessened total lung volume of 1.5 litres.

The authors have found a close relationship between the measured and calculated lung volume when the chest volume is calculated from the length of the sternum from the *incisio intraclavicularis* to the articulation of the *sterno-xiphoidea*, the horizontal distance from the middle of the sternum at the insertion of the third rib to the spinal column, and the distance across the sixth ribs in the mid-axillary line. The chest volume is determined at rest, and at the points of maximal inspiration and expiration.

The results of these studies of the volumes of the lungs in normal persons have been compared with similar data obtained from 31 male patients, and 20 female patients suffering from tuberculosis of the lungs. The patients of either sex in the incipient stages of the disease show normal total lung volumes but diminished vital capacities. The amount of residual air is therefore increased. In patients with more advanced disease, the total lung volume is much diminished. The vital capacity is also lessened, while the quantity of residual air is practically normal. Observations are at present lacking as whether any changes in the composition of the expired air are characteristic of pulmonary tuberculosis. The result of such observations will be awaited with interest as they may offer some clue as to the means adopted by the animal organism in combating tubercular changes in the pulmonary tissues.

Public Health.

NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending March 23, 1918:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Enteric Fever	4	1	5	0	18	2	27	3
Scarlatina	14	0	2	0	12	0	28	0
Diphtheria	85	2	9	0	60	3	154	5
*Pul. Tuberculosis	24	12	1	4	0	1	25	17
C'bro-Spl. Menin.	0	0	0	0	2	0	2	0

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending March 24, 1918:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Enteric Fever	2	0	11	0	13	0
Scarlatina	25	1	22	0	47	1
Diphtheria	66	2	62	0	128	2
Pulmonary Tuberculosis	22	5	6	2	28	7
Poliomyelitis	6	—	7	—	13	—

QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending March 23, 1918:—

Disease.	No. of Cases.
Enteric Fever	15
Scarlatina	11
Diphtheria	44
Pulmonary Tuberculosis	7
Cerebro-spinal Meningitis	10
Poliomyelitis	3
Malaria	16
Erysipelas	2
Dysentery	2

SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, during the week ending March 16, 1918:—

	Adelaide. Cs.	Dths.	Rest of State. Cs.	Dths.	Totals. Cs.	Dths.
Enteric Fever	0	0	3	1	3	1
Scarlatina	0	0	4	0	4	0
Diphtheria	0	0	19	1	19	1
Pulmonary Tuberculosis	1	1	7	1	8	2
Ersysipelas	1	0	0	0	1	0
Morbilli	0	0	3	0	3	0

TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, during the week ending March 23, 1918:—

Disease.	Hobart. Cases.	Launceston. Cases.	Country. Cases.	Whole State. Cases.
Enteric Fever	0	2	4	6
Scarlatina	1	1	0	2
Diphtheria	0	4	9	13
Pulmonary Tuberculosis	3	1	4	8

Naval and Military.

CASUALTIES.

In the 387th list of casualties sustained by Australian troops the name of Captain William James Ellery Phillips appears with the entry "wounded—gas—." Both Major Alexander Peter Drummond and Captain John Wilkie Young are reported to be severely ill (second occasion). In the list of corrections published there is an announcement that Major John Wellesley Flood, who was previously reported to be missing, has arrived in England. It will be remembered that Colonel Strangman and Major Flood were passengers on the *Matunga*. We published a short notice on March 2, 1918 (page 184), to the effect that both these officers were safe.

[1] *Journ. Exper. Medicine*, Vol. XXVII., p. 64, January, 1918.

Abstracts from Current Medical Literature.

DERMATOLOGY.

(116) T.N.T. Dermatitis.

G. B. Page calls attention to the irritating effects of trinitrotoluene in those whose work brings them into direct contact with this material, which at the present time is being extensively used as a high explosive, especially in aerial bombs (*Journ. Royal Naval Medical Service*, January, 1918. The majority of the affected persons show a yellowish staining of the hands, together with a slight hardening of the skin, whilst cuts or fissures become considerably irritated. In susceptible individuals a severe form of dermatitis may ensue. The disease is localized to the exposed parts of the arms, and shows a predilection for the flexor aspect of the forearms, but may extend and involve the extensor surfaces, the wrists, the dorsum of the hands, and the soft skin between the fingers. As a rule the palmar surfaces of the hands exhibit only yellowish staining. At its onset the appearance of the dermatitis is finely papular with a considerable amount of erythema and a distinct tendency to vesiculation. Pruritus is always severe, and the consequent scratching considerably aggravates the disease. In the very severe and acute cases vesiculation is a marked feature, and œdema may occur. As the disease becomes chronic there is a tendency for scaly patches to occur, and with this the itching becomes less severe. In the treatment of this dermatitis calamine, or other soothing lotion is recommended for all cases in the early stages, and in the mild type of cases nothing further is required throughout. The author himself uses 10 grammes of zinc oxide suspended in 300 c.cm. of a 1% carbolic acid solution, the latter being given with the object of relieving the pruritus. For the rough chronic patches, he has found Lassar's paste with one gramme of salicylic acid to 22 c.cm. effective. Individuals showing a strong susceptibility to this substance should be transferred to other work.

(117) The Pathology of Mycosis Fungoides.

J. F. Fraser (*Journ. Cutan. Diseases*, December, 1917), after giving an exhaustive clinical and histological account of seven cases of *mycosis fungoides*, which he personally studied, summarizes his observations as follows: (1) While not denying the truth of the conclusion arrived at by the Dermatological Section of the Royal Society of Medicine in London that *mycosis fungoides* is a disease *sui generis*, a conclusion which was based largely on the presumption that the disease presents a pathological picture from first to last which is essentially different to that of any of the other dermatoses, the author found that in two of his cases he was unable to differentiate them from sections of psoriasis and para-psoriasis that he had in his possession. (2) The histological features presented in five of his cases were those of a subacute inflammatory process rather than that of a neoplastic process. In two of his cases, however, his opinion coincided with those, who claimed that the disease partakes of the nature of both, but in the stage under observation the inflammatory features predominated. (3) In all of his cases there was more or less involvement of the lymphoid tissue, and in two cases of the bronchi, so that his observations suggest that *mycosis fungoides* is not limited to the skin, but is a disease with general involvement, especially of the lymphoid tissues. (4) The bacterial and biological investigations gave negative results.

(118) The Pre-operative Reduction of Epithelioma by Roentgen Rays or Radium.

Douglas Montgomery and George Culver state that radiation with radium is now an accepted principle in the operative treatment of cancer in certain situations, as, for example, of the uterus, including its cervix, of the vagina, of the rectum, of the tongue and even of the lips (*Journ. Cutan. Diseases*, December, 1917). They are of opinion that this principle can likewise be made to apply to cancer of the skin, and that apparently inoperable cancers of this region can be brought well within the limits of more easy eradication. In order to exemplify this, and to demonstrate what may be attained by employing the Roentgen rays, within the limits in which they act beneficially, they report the case of an old man, *aet.* 91, who had an epitheliomatous ulcer involving almost the whole of the left side of the nose. There was the possibility that if the whole lesion was curetted, the shock would probably be sufficient to kill the patient, so that he was first given five Roentgen ray exposures of 30 minutes each, from a medium tube at 10 cm. distance, spread over a period of 22 days, following which there was a marked reaction with flattening of the edges of the lesion. This was later followed by another exposure of 30 minutes directed into the deep portion of the ulcer near the eye. Then they were able to curette the area nearest the tip of the nose, after which the rays were again applied to the raw surface for 30 minutes, and then swabbed with the acid nitrate of mercury. A week later the surface nearest the eye was treated in a similar manner, a procedure that previously would not have been attempted. A month later everything was healed but the upper part of the ulcer, which was treated on lines similar to those just described, with the result that the lesion healed entirely. In conclusion, they state that what may be achieved by the use of Roentgen rays or radium is so wonderful in suitable cases as not to require any embellishment. These remedies, however, must not be employed beyond their potentialities, nor should the physician, because these potentialities are so effective, neglect the consideration of other potent therapeutic agents.

(119) Radium in Dermatology.

W. Knowsley Sibley (*Urologic and Cutan. Review*, February, 1918) finds that the α rays of radium, which correspond to about 90% of the radiation output, having but small penetrating power rapidly produce erythematous conditions of the skin. The β rays represent about 9%, and are more penetrating, while the γ rays, representing only 2% of the radiation output, are still more penetrating and are practically akin to hard X-rays. As it is possible to break up any given quantity of radiation into its component parts, the application of radium is safer, more precise and easier than the application of X-rays. After describing the methods employed of applying radium in the treatment of skin diseases, he proceeds to record the results which have been attained by its means. The most satisfactory results are obtained in superficial rodent ulcers, naevi and keloids. Rodent ulcers of small diameter, not affecting the mucous membranes, are often cured by one full exposure. Pruritus is usually relieved, if not cured by radium. *Lupus erythematosus* is often improved, but the results in *lupus vulgaris* are not as satisfactory. Fibroma and papilloma are at times cured by radium. Both chronic eczema and the lichenification resulting from chronic dermatitis may be cured. Temporary cure has been achieved in psoriasis. He claims that radium has many distinct advantages over X-rays, and the cosmetic results are strikingly better than those produced by other agents.

(120) Roentgen Observations of the Pituitary Region in Intracranial Lesions.

Under this heading George C. Johnston (*Amer. Journ. Roent.*, November, 1917) deals with the X-ray changes in this and neighbouring regions in certain intracranial lesions. The details are given of the normal Roentgen image of the *sella turcica*, the anterior fossa, the internal auditory meatus, the grooves on the anterior surface of the skull for the various blood vessels and the normal appearance of the sutures. He describes the permissible variations in type of the *sella* with variations in the size, shape and contour of the clinoid processes. He gives an account of the changes in the region of the *sella turcica*, and in the base of the skull occurring in certain types of so-called idiopathic epilepsy, especially the more or less marked hyperostosis involving the clinoid processes, the base of the anterior fossa, and, in some instances, the post-clinoidal region. These have been described before as local acromegaly. He discusses changes due to acromegaly, including enlargement of the *sella turcica*, etc. It is pointed out that in some of these cases, the effect on the pituitary fossa is the same as in incipient pituitary struma. He deals with changes produced in the region of the *sella* by pituitary struma. It is

pointed out that evidence of change in the region of the pituitary may be accepted as diagnostic of the existence of pituitary struma, the Roentgen ray rarely visualizing the tumour as such. It is pointed out that in cystic degeneration of the pituitary, the most marked feature is usually the backward bending of the posterior clinoid processes. In adeno-carcinoma of the gland, the tumour growth is frequently downwards, the roof of the sinus being destroyed and showing in the picture a marked thinning of the bone in this region. He recounts changes produced by the presence of tumours of the anterior fossa and those arising above and behind the *sella*. Attention is drawn to the fact that tumours of the anterior fossa may show a pressure atrophy of the anterior clinoidal process and over the *sella* itself, while tumours of the posterior fossa show a rather general pressure due to the developement of hydrocephalus. He describes the earliest possible Roentgen evidence of internal hydrocephalus and of brain tumours.

BIOLOGICAL CHEMISTRY.

(121) Diets Producing Pellagra.

E. V. McCollum and N. Simmonds consider that they have reached the third phase of their studies on the biological analysis of the constitution of various diets (*Journ. Biol. Chemistry*, October, 1917). The first phase dealt with the nutritional failure of animals fed upon diets of purified proteins, carbohydrates, fats and inorganic salts. From these inquiries it appeared that these failures were due to the absence of two substances or groups of substances from the rations. One of these substances is soluble in fats and is found in a concentrated form in butter-fat and in the fats of egg-yolk. The other substance is not associated with fats, but is present in natural foods in relative abundance. It can be readily supplied to experimental rations in the form of an alcoholic extract of some natural food. Since it is soluble in water, it is known as the water-soluble accessory. The second phase dealt with the systematic study of several typical representatives of the classes of natural foods, such as the seeds, leaves, fruits and tubers of plants. These inquiries showed that no seed can induce growth for a prolonged period in young animals when the seed is fed as the sole source of nutriment. While mixtures of seeds maintained the weight of growing animals, they did not suffice for normal growth. The ash of the seeds of wheat, oats, maize, rice and other grains are deficient in the quantity and relative quality of the inorganic constituents of a satisfactory diet. Seeds are deficient in the fat-soluble accessory. The proteins of seeds are deficient in essential amino-acids which cannot be synthetized in the animal body. Mixtures of seeds may be satisfactory in this respect. A suitable ration can be prepared from any seed by adding purified protein, pure inorganic salts and a growth-promoting fat. The leaves of plants are rich in those constituents of a diet in which seeds are deficient. Mixtures of leaves and seeds yielded rations causing normal growth in young animals. The ash of leaves is rich in chlorides, calcium and sodium, which are found in small amounts in seeds. Leaves contain the anti-neuritic vitamine. The authors have commenced the examination of diets leading to pellagra and have made an examination of the dietetic properties of mixtures of maize kernel and bean flour. They find that both maize and bean seeds are deficient in the fat-soluble accessary, though well supplied with the anti-neuritic vitamine. The most suitable protein mixture is attained, when 80 parts of maize are mixed with 20 parts of bean. Such a mixture is, however, little superior to an equivalent amount of the proteins of maize kernels. When the maize kernel contains 9% proteins, growth occurs at about one-half the normal rate. The authors believe if the proteins in maize were increased to 12% that normal growth would result. A detailed study of the exact nature of the mineral defect shows that both sodium and calcium are present in too small quantity. The authors point out that in districts where the drinking water contains small amounts of sodium and calcium, the consumption of milk and the use of green vegetables make for safety in human nutrition. They point out how near the danger line of faulty nutrition are certain classes of the population of the United States. The feature of these diets is the mineral deficiency in sodium and calcium.

(122) Utilization of Fats.

J. F. Lyman (*Journ. Biol. Chemistry*, October, 1917) has fed dogs with lard, ethyl palmitate, glyceryl palmitate and palmitic acid. The dogs weighed about 12 kilos. and received a daily basal ration of 200 gm. meat, 50 gm. cracker crumbs and 10 gm. agar. With this ration was incorporated 40 gm. fat, except in the case of glyceryl palmitate, when, for some reason not stated, 31 gm. was used. It was found that over 96% lard, 95% glyceryl palmitate, 81% palmitic acid and 55% ethyl palmitate were absorbed. The authors conclude from these results that emulsified fats are not absorbed as such, but only after hydrolysis, and that the melting point of the ester is not the chief factor in determining the rate of hydrolysis.

The same author has also studied the effect of feeding white rats with palmitic acid, ethyl palmitate and glyceryl palmitate upon the composition of the depôt fats of white rats (*Journ. Biol. Chemistry*, October, 1917). The rats received a basal ration of commercial dog-biscuit, casein and dry yeast. The fat was incorporated so that the food contained 30% of palmitic acid. Four groups of rats were employed. One group being fed on the fat-free ration served as control. Adult rats were employed. They were starved until they had lost 25% of their body weight. They then received the experimental ration, which was continued as long as the rats increased in weight. When palmitic acid was present in the diet, the depôt fat contained much tripalmitin and had a melting point of 42° C., but when the diet was fat-free, the melting point of the fat was 15° C.. Neither free palmitic acid nor ethyl palmitate appeared in more than traces in the depôt fat. The iodine figure for the fat in the subcutaneous tissues was approximately 50 when palmitic acid was present in the diet, but the figure was over 70 when the rats received the ration free from fats.

(123) Proteins of Cow's Milk.

T. B. Osborne and A. J. Wakeman have made an exhaustive study of the proteins of cow's milk other than the caseinogen and lactalbumin (*Journ. Biol. Chemistry*, January, 1918). Recent studies of the chemical constitution of different proteins have shown wide variations in their composition. Studies upon the nutritive value of different proteins reveal how greatly these vary as sources for the nitrogenous components of the animal body. The recognition that milk contains the water-soluble vitamine needed to promote growth in young animals and to maintain the weight of adults, makes it necessary to examine milk carefully in respect to the less known protein constituents. Such an examination must precede any attempt to determine the chemical structure of the anti-neuritic vitamine. The proteins of skimmed milk have been separated by repeated precipitation with ammonium sulphate. The caseinogen has been removed by precipitation with sulphuric acid from a solution of the protein. The lactoglobulin has been precipitated by saturation with magnesium sulphate. The filtrate containing the remaining proteins and free from lactose and other non-protein constituents of milk, has been heated to 90° C., when a flocculent coagulum of lactalbumin is obtained. After suitable purification the lactalbumin has been analysed. It is found to be almost free from phosphorus. The freedom of this preparation from globulin has been demonstrated by anaphylactic experiments of H. G. Wells. Guinea-pigs, sensitized with this product, are prompty killed by a second injection, but guinea-pigs, sensitized against lactoglobulin, are unaffected by injections of the lactalbumin. On analysis of the lactoglobulin it is found to contain an appreciable quantity of phosphorus. Although much work has been done in respect to the presence of proteoses in milk, the authors have been unable either to affirm or deny its presence. Many experiments have been made in regard to Siegfried's nucleon, and the authors have arrived at the opinion that it is a mixture of coagulated protein with some unknown body yielding phosphoric acid upon hydrolysis. From the alcoholic washings of the caseinogen from large quantities of milk the authors have isolated a new protein soluble in 50% to 80% alcohol and allied to the gliadin of wheat. Figures are given for the amounts of lactoalbumin and lactoglobulin in cow's milk.

British Medical Association News.

ANNUAL MEETING.

The annual meeting of the New South Wales Branch was held on March 22, 1918, at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, Dr. R. Gordon Craig, the President, in the chair.

Annual Report of the Council.

Dr. R. H. Todd, the Honorary Secretary, moved, and Dr. W. F. Litchfield seconded: "That the report, as printed below, be received."

The Council has the honour to present the following Report upon the work of the Branch for the year ended March 30, 1918:—

Membership.—The Membership is now 1,091, as against 1,038 at the time of the last Annual Report. The losses have been as follows, *viz.*: By resignation, 4; by removal out of the Branch, 10; by non-payment of subscription, 1; exclusive of a number of members absent on military service, on whose account payment has been made vicariously to the London Office, to prevent the lapse of their membership under the Articles of Association; by death, 10. The losses by death were as follows: Dr. H. S. Maw, Dr. W. Barkas, Dr. V. E. Ludlow, Dr. W. Kelty, Dr. W. D. Kirkland, Dr. W. R. Aspinall, Dr. F. B. Metcalfe, Dr. C. R. A. Pye, Dr. G. M. Hunt, Dr. J. Davie. Of these, Dr. W. D. Kirkland, Dr. F. B. Metcalfe, Dr. C. R. A. Pye, Dr. G. M. Hunt and Dr. W. R. Aspinall were killed in action in France, and Dr. J. Davie died of wounds received on active service.

Meetings.—Eleven Ordinary Meetings, including the Annual Meeting, with an average attendance of 34, were held. There were seven Clinical Evenings, with an average attendance of 23. The business of the Ordinary Meetings and Clinical Evenings included 19 papers, 24 reports of cases, numerous exhibits and 11 lantern demonstrations. One meeting was appropriated to a discussion on fractures, which was opened by a paper and lantern demonstration by Mr. Hamilton Russell (Melbourne) and another was set apart for an address and lantern demonstration by Dr. W. J. Penfold, the Director of the Commonwealth Serum Laboratories in Melbourne.

Representation.—The Branch was represented as follows:—

(*a*) Council, British Medical Association: Dr. C. J. Martin (Lister Institute).
(*b*) Representative Body: Dr. J. Adam Dick.
(*c*) Federal Committee of the British Medical Association in Australia: For the year 1917, Dr. G. H. Abbott and Dr. D. Thomas; for the year 1918, Dr. G. H. Abbott and Dr. F. P. Sandes, Dr. R. H. Todd being Dr. Abbott's substitute at the Meeting of the Committee, February 6 and 7, 1918.
(*d*) Australasian Medical Publishing Company, Limited: Dr. W. H. Crago, Dr. F. P. Sandes, Dr. R. H. Todd.
(*e*) Council of the New South Wales Bush Nursing Association: Dr. R. Gordon Craig.
(*f*) State Medical War Committee (Disablement and Training Committee of the State War Council): Dr. George Armstrong, Dr. W. H. Crago, Dr. R. H. Todd.

Council.—The attendance of Members of the Council and of the Standing Committees of the Council at Meetings was as set out in table below:—

The *Representatives of the Local Associations* appointed on the invitation of the Council to attend the regular Quarterly Meetings of the Council were as follows: Dr. A. Maitland Gledden (City), Dr. E. Cuthbert Hall (Central Western), Dr. A. E. R. Bligh (Northern Suburbs), Dr. Harold Ritchie (Northern District), Dr. W. A. H. Burkitt (Central Southern), Dr. F. C. S. Shaw (Southern District), Dr. H. H. Parkinson (South Sydney), Dr. G. H. Walton Smith (Eastern Suburbs), Dr. S. S. Shirlow (Balmain District), Dr. W. J. White (Illawarra Suburbs), Dr. H. Busby (Western), Dr. H. Browne (Western Suburbs).

B.M.A. Building.—The members are indebted to Dr. W. H. Crago for another year of valuable service as Attorney of the Branch for the management of the B.M.A. Building.

The Library.—Dr. W. H. Crago, acting as Honorary Librarian for Dr. J. Adam Dick, absent on military service, has had control of the Library. Gifts of books have been received from Dr. W. H. Tomlins, Dr. T. Storie Dixson, St. Andrew's College, and the Victorian Branch. The sum of £35 was appropriated for the binding of journals, and the work is in progress.

The Medical Journal of Australia.—Despite the continuation of war-time difficulties *The Medical Journal of Australia* has well maintained its position as the official organ of the Association in Australia. The Directors and the Editor are to be congratulated on their work.

Affiliated Local Associations of Members.—The following is a list of the Affiliated Local Associations of Members and their Honorary Secretaries:—

Balmain District: Dr. W. B. Grant, Rozelle.
Border: Dr. R. Affleck Robertson, Albury.
Central Northern: Dr. H. G. Allen, Newcastle.
Central Southern: Dr. G. A. Buchanan, Goulburn.
Central Western: Dr. E. C. Hall, Parramatta.
City: Dr. C. E. Corlette, College Street, Sydney.

	Council. (12)	Executive and Finance Committee. (12)	Ethics Committee. (12)	Organization and Science Committee. (13)	Medical Politics Committee. (13)	*Medical Journal* Sub-Committee (Exec. and Fin. Com.) (11)
Dr. R. Gordon Craig (President)	10	11*	4	0	10	10
†Dr. C. B. Blackburn (Vice-President)	0	0	0	0	0	—
Dr. A. A. Palmer (Acting Vice-President)	10	7	10	0	8	—
Dr. G. H. Abbott	1	—	—	1*	—	—
Dr. George Armstrong	9	9	—	—	10	—
Dr. Fourness Barrington	6	—	4*	—	—	—
Dr. A. J. Brady	9	—	9	—	—	—
Dr. W. H. Crago (Honorary Treasurer; Acting Honorary Librarian during the absence of Dr. J. Adam Dick)	8	11	3	3	5	8
Dr. Andrew Davidson	11	—	10	10	—	—
†Dr. J. Adam Dick (Honorary Librarian)	0	0	—	—	—	—
Dr. Sinclair Gillies (Ex-President)	7	8	11	—	—	5
Dr. Sydney Jamieson	6	7	—	—	—	—
Dr. T. W. Lipscomb	10	—	—	—	10	—
Dr. W. F. Litchfield	10	—	—	11	6	—
Dr. F. Antill Pockley	5	—	—	—	8*	—
Dr. F. P. Sandes	11	—	—	—	11	2
†Dr. R. Scot Skirving	1	—	—	—	—	—
Dr. David Thomas	6	7	—	—	—	—
Dr. R. H. Todd (Honorary Secretary)	11	11	11	8	8	10
Dr. R. B. Wade	10	—	11	10	—	—

† Absent for part or all of the year on active service.
* Chairman.

Eastern District: Dr. F. O. Stokes, Taree.
Eastern Suburbs: Dr. F. G. N. Stephens, Rose Bay.
Illawarra Suburbs: Dr. W. J. Binns, Kogarah.
North-Eastern: Dr. R. V. Graham, Lismore.
Northern District: Dr. E. W. Buckley, Tamworth.
Northern Suburbs: Dr. E. A. R. Bligh, North Sydney.
South-Eastern: Dr. W. L. Kirkwood, Wollongong; Dr. J. L. Park, Corrimal (Acting).
Southern District: Dr. W. W. Martin, Wagga Wagga.
South Sydney: Dr. J. Hoets, Glebe.
Western Suburbs: Dr. J. F. Walton, Summer Hill.
Western: Dr. A. E. Colvin, Orange.

Annual Meeting of the Delegates of the Local Associations with the Council.—The Sixth Annual Meeting of the Delegates of the Affiliated Local Associations of Members with the Council was held on October 5, 1917, at the B.M.A. Library, Sydney. The Delegates were as follows:—

Dr. A. Maitland Gledden (City).
Dr. E. A. R. Bligh (Northern Suburbs).
Dr. Harold Ritchie (Northern District).
Dr. T. J. Henry (North-Eastern).
Dr. J. J. Hollywood (Central Northern).
Dr. E. Cuthbert Hall (Central Western).
Dr. G. A. Buchanan (Central Southern).
Dr. W. W. Martin (Southern District).
Dr. J. Park (South-Eastern).
Dr. W. C McClelland (South Sydney).
Dr. G. H. Walton Smith (Eastern Suburbs).
Dr. S. S. Shirlow (Balmain District).
Dr. W. J. White (Illawarra Suburbs).
Dr. L. W. Roberts (Western).
Dr. George Allan (Western Suburbs).

The proceedings of the meeting were published in *The Medical Journal of Australia*, 1917, Vol. II., page 342.

Contract Practice.—

(*a*) Friendly Society Lodges.—The approved Common Form of Agreement has continued to work satisfactorily. During the year the lodges in the following localities, which previously made other arrangements for medical attendance, accepted the Agreement, namely: Orange, Canterbury (in part).

(*b*) Colliery Employees.—The question of the adoption of a common form of agreement for use in contract attendance on colliery employees has been under consideration, and it is hoped that terms and conditions of attendance will be arranged acceptable both to the medical officers and the employees.

War Emergency Organization.—

(*a*) Equality of Obligation to Serve.—At the instance of the Federal Committee of the Association in Australia, a plebiscite of the members was taken on July 16, 1917, on the following question, namely:—

"Are you in favour of the Federal Committee of the British Medical Association in Australia requesting the Commonwealth Government to pass legislation to bring about compulsory enlistment of the medical profession in Australia for service in the Australian Imperial Force, including service overseas?"

The same action was taken by every other Branch in Australia. The returns were as follows:—

Branch.	Yes.	No.	Total.	Majority in Favour.	Ratio of Votes in Favour to Total Votes.
N.S.W.	417	133	550	284	75.82
Vict.	269	143	412	126	65.3
Q'land	111	19	130	92	85.4
S. Aust.	122	20	142	102	85.9
Tas.	39	13	52	26	75.0
W. Aust.	53	22	75	31	70.6
Totals	1,011	350	1,361	661	

The figures showed (1) that all the six States were "in favour," (2) that the "majority in favour" 'was 74.28% of those voting.

It is understood that the Federal Committee has presented the facts and figures in connexion with the plebiscite to the Commonwealth Government through the Prime Minister.

(*b*) Attendance upon Dependants of Friendly Society Lodge Members Absent on Active Service.—Much effort was spent in negotiation between the Council and certain of the Friendly Society Orders, with the object of devising a scheme which was at once equitable and practicable for attendance on the dependants of Friendly Society Lodge members absent on active service. The following resolution was eventually passed by the Council on July 3, 1917, and published for the guidance of members, *viz.*:—

That it be left to individual medical officers of friendly society lodges to determine, in regard to any particular lodge members on their lists, absent on active military service whether or not the dependants of such members shall be given medical attendance free of charge.

(*c*) Roll of Honour.—In accordance with the decision of the Annual (1917) Meeting of the Branch, steps have been taken for enrolment of the names of all members enlisted for active service in the Naval or Military Forces of the Empire. It is hoped that the ultimate form of the record will be a worthy permanent memorial of their loyal and devoted services. The list amounts now to 372 names.

Legislation.—

(1) In connexion with the *Workmen's Compensation Act, 1916* (Schedule One, 4 and 14), the following memorandum was submitted to the members:—

Workmen's Compensation Act, 1916.

[Schedule 1 (4) (14)].

Remuneration of "legally qualified medical practitioner, provided and paid by the employer" (employer's "medical examiner.")

In view of the fact that sufficient information is not yet available for determining what fees or other remuneration should be received from employers (including insurers) for examining and reporting upon workmen—

(*a*) under Schedule 1 (4) who have "given notice of an accident'" (W.C. Act, s. 2);
(*b*) under Schedule 1 (14) "receiving weekly payments" under the Act [Schedule 1 (1) (*b*)];

the Medical Politics Committee (July 31, 1917) has requested that members will not make final arrangements with employers (or insurance companies) for the purpose, until the matter has had consideration; and members are invited to make suggestions for appropriate remuneration.

(2) Venereal Diseases.—The example set by Queensland, Western Australia, Victoria and Tasmania of introducing legislation for compulsory treatment of venereal diseases has not yet been followed in New South Wales or South Australia.

Regulations.—The following Regulations were made, *viz.*:—

(*a*) Regulation covering the sale and distribution of vaccines, etc., by medical practitioners who undertake the immediate care of patients:—

That a medical practitioner, who undertakes the immediate care of patients (that is to say, who attends, advises, or prescribes for patients otherwise than on behalf of and in collaboration with other practitioners who are the medical attendants of such patients) ought not to sell or be pecuniarily interested in the sale or distribution of vaccines or similar laboratory products, except such products as are, or are intended by him, to be used for the diagnosis, prevention, or treatment of disease in the particular patients for whom he, or their medical attendants collaborating with him, shall have prescribed them.—General Meeting, May 18, 1917.

(*b*) Secret Commissions:—

1. That no member shall receive commission from or share profits with any chemist, or, except with the sanction of the Council, have any pecuniary interest in any shop for the sale of drugs.

2. That no member shall use any secret formula in prescribing or make it a condition that any medicine or appliance prescribed by him shall be dispensed or supplied at any particular place, but nothing herein contained shall be deemed to prohibit the use of special formulæ in hospital or contract practice prescribing.

3. That no member shall accept from or pay commission to any insurance agent.—General Meeting, August 31, 1917.

(*c*) Position of practitioner (medical examiner) examining

patients under care of another practitioner (medical attendant):—

1. Except as hereinafter mentioned, the medical examiner should give the medical attendant such notice of the date, time and purpose of his visit as will afford reasonable opportunity for the medical attendant to be present should he or the patient so desire.

The exceptions are:—

(*a*) When circumstances justify a surprise visit.
(*b*) When circumstances necessitate a visit within a period which does not afford time for notification.
(*c*) When the medical examiner, after due enquiry made, has no information as to whether the patient is under medical care.

Where the medical examiner has availed himself of any of the above exceptions, it shall be his duty to inform the medical attendant, if any, as soon as possible, of the fact of his visit, and the reason for his action.

2. The medical attendant must not put any unnecessary difficulties in the way of fixing a time convenient to both practitioners.

3. If the medical attendant fails to appear at the time agreed upon, the medical examiner may proceed with his examination forthwith.

4. The medical examiner must not, without the consent of the medical attendant, do anything in the course of his examination which involves active interference with the treatment of the case.

5. Where the medical attendant fails to communicate with the medical examiner, the medical examiner shall, at his discretion and subject to the consent of the patient, make any examination he may consider necessary.

6. The medical examiner must not make any comments to the patient which are of the nature of criticisms of, or reflections upon, the treatment, nor must be express, without the concurrence of the medical attendant, any opinion to the patient as to the ætiology, diagnosis, or prognosis of the case. His duty is strictly confined to examining into such matters as are necessary for the purpose of his report, and reporting to his employer, and to his employer only, his conclusions from such examination.

7. If the medical examiner finds it necessary to report to his employer that any modification in the treatment which is being carried out, is in his opinion necessary to the more rapid recovery of the case, he shall, if possible, in the first instance, so inform the medical attendant.

—Extraordinary General Meeting, October 12, 1917.

(*d*) Intra-professional Restriction.—Explanatory note on meaning of "Professional Recognition" as used in the Regulation:—

That members be informed that it is held to be in contravention of the "Intra-professional Restriction" Regulations that any member should, directly or indirectly, communicate in any way with any practitioner who is under the Regulations in regard to any patient who is or has been under such practitioner's care.—Council Meeting, January 8, 1918.

(*e*) Fees for Life Insurance Examination and Report:—

That where a proponent has been deferred for subsequent examination and report, a fee of 10s. 6d. is reasonable, where the original examination was made by the practitioner asked to accept the same; but that where the original examination was made by another practitioner, the minimum fee should be £1 1s.—Council Meeting, January 8, 1918.

Federal Committee.—Meetings of the Federal Committee of the British Medical Association in Australia were held on April 25 and 26, 1917, in Sydney, and on February 6 and 7, 1918, in Melbourne. Reports of the proceedings were published in *The Medical Journal of Australia*, 1917, Vol. I., pp. 408-411, 428-431; 1918, Vol. I., pp. 156-158, 180-182.

Australian Medical Association Benevolent Fund.—Effect has been given to the wish of the Trustees of the above Fund that its administration should be undertaken by the Council of the Branch; and Dr. W. H. Crago and Dr. George Armstrong, on the nomination of the Council, were duly appointed to be co-Trustees with Sir Philip Sydney Jones.

Systematic Teaching of Medical Students in Medical Ethics.—In accordance with a resolution of the General Medical Council, Summer Session, 1916 (see *British Medical Journal*, Suppl., 1916, Vol. I., p. 145), a recommendation was made to the Faculty of Medicine of the University of Sydney that instruction should be given to medical students on the duties which devolve upon practitioners in their relationship to the State and upon the generally-recognized Rules of Medical Ethics. The Faculty of Medicine approved of the proposal, and, it is understood, that the Senate has provided for arrangement being made for medical students to receive systematic instruction in these important subjects.

Constitution.—Some correspondence has taken place with the Parent Association in regard to the position of the New South Wales Branch as being registered under the Companies Act. It is understood that the Organization Committee of the Central Council has had proposals under consideration giving greater freedom of the Overseas Branches in the management of their local affairs.

Hospitals.—In regard to the matter of attendance upon cases in obstetric wards of public hospitals, a resolution was passed by the Council to the effect that such attendance should be honorary and should be confined to suitable public hospital cases; and that there should be a trained obstetric nurse resident in the hospital.

Nationalization of the Medical Profession.—The attention of members is invited to a pronouncement setting out the principles underlying any consideration of the subject of the Nationalization of the Medical Profession, which was adopted by the Federal Committee at its meeting in April, 1917. It is to be found is the report of the proceedings of the Committee published in *The Medical Journal of Australia*, 1917, Vol. I., p. 409, and a further discussion in regard to it, after its submission to the several Branches, is reported in 1918, Vol. I., p. 156.

GORDON CRAIG, President.

Dr. W. H. Crago moved and Dr. W. F. Litchfield seconded, that the financial statement be adopted. The motion was carried.

Dr. W. H. Crago also presented the Premises Account, which had been audited by Messrs. L. S. Drummond and Co. From the revenue account it was seen that, notwithstanding the necessity for cleaning and repainting the whole front of the building and the increase in wages, the ordinary expenditure only amounted to £1,264, which admitted of the transfer of £1,819 to the profit and loss account. After the interest on the mortgage and on the debentures had been paid and other sundry expenses been allowed, the sum of £448 remained to be transferred to the accumulated fund account.

During the course of the year, the liabilities had been reduced by the repayment of £1,000 off the mortgage. The accumulated fund stood at £5,033. The sum of £200 had been transferred from the general account of the New South Wales Branch, and a further sum of £75 from the *Australasian Medical Gazette* account, bringing the accumulated fund to £5,308. The value of the land and building stood at £29,463.

A hearty vote of thanks was accorded to Dr. F. W. Hall and Dr. A. Maitland Gledden for their services as auditors.

Presidential Address.

Dr. R. Gordon Craig read the presidential address (see page 273).

Dr. A. A. Palmer, the President-elect, in moving a vote of thanks to Dr. Gordon Craig for his address, remarked that it was consolation to him, at all events, to know that these annual addresses were not open to discussion and were above criticism. He recognized that he was speaking for all the members when he stated that there was a profound feeling of regret that the excellent address to which they had listened, marked the termination of the period of office of Dr. Gordon Craig as President.

The motion was carried by acclamation and Dr. Gordon Craig replied in a few appropriate terms.

Election of Office-bearers and Members of Committee.

The Chairman announced the result of the election of the Office-bearers and members of the Committee as follows:—

President—Dr. Arthur A. Palmer.
Vice-President—Dr. C. B. Blackburn.
Members of Council—Dr. George Armstrong, Dr. Archie Aspinall, Dr. F. Barrington, Dr. A. J. Brady, Dr. W.

BRITISH MEDICAL ASSOCIATION.

(NEW SOUTH WALES BRANCH.)

Receipts and Expenditure for the Year ended December 31, 1917.

Jan. 1, 1917—	£	s.	d.
Balance Forward	292	19	1
Subscriptions (net)	3,371	12	0
Interest Received	21	16	4
Sales of Common Forms of Agreement, etc.	7	4	7
	£3,693	12	0

	£	s.	d.
Subscriptions, British Medical Association	1,021	13	0
Payment for *The Medical Journal of Australia*	959	10	0
Premises Account	200	0	0
Clerical Assistance	715	10	0
Rent (net)	130	0	0
Assistant Librarian	65	0	0
Printing Account	82	12	5
Stamp Account	78	11	1
Federal Committee	25	0	6
Exchange on Cheques	2	4	8
Sundries	57	7	3
Expenses at Meetings	17	5	0
Telephone	17	5	8
Balance—			
As per Cash Book £320 19 2			
Petty Cash 0 13 3			
	321	12	5
	£3,693	12	0

(Sgd.) FRED. W. HALL
(Sgd.) A. MAITLAND GLEDDEN } Auditors.

W. H. CRAGO,
Hon. Treasurer.

18th March, 1918.

H. Crago, Dr. R. Gordon Craig, Dr. Andrew Davidson, Dr. J. Adam Dick, Dr. Sinclair Gillies, Dr. Sydney Jamieson, Dr. C. H. E. Lawes, Dr. F. W. Litchfield, Dr. T. W. Lipscomb, Dr. F. P. Sandes, Dr. S. A. Smith, Dr. D. Thomas, Dr. R. H. Todd, and Dr. R. B. Wade.

Dr. W. F. Litchfield moved:—

That the thanks of the meeting be conveyed to the scrutineers, Dr. A. J. Spiller-Brandon, Dr. J. C. Edwards, Dr. A. J. Gibson, Dr. A. Maitland Gledden, Dr. H. Seaward Marsh and Dr. John Harris for their services at the ballot.

The motion was carried unanimously.

Election of Auditors.

Dr. A. Davidson moved that Dr. F. W. Hall and Dr. A. Maitland Gledden be the Auditors for the ensuing year.

In seconding the motion, Dr. Crago pointed out that the work of the auditors was by no means a sinecure, and that Drs. Hall and Gledden had devoted much time and energy to this honorary work. In the course of his remarks he recalled to the memory of his audience that the present year was the thirtieth during which they had entrusted to him the care of the finances of the Branch.

The motion was carried unanimously.

Election of Representatives.

On the motion of Dr. F. W. Sandes, Dr. J. Adam Dick was appointed Representative on the Representative Body, and Dr. W. Chisholm the Deputy Representative.

Medical Benevolent Fund of New South Wales.

In the absence of Sir Herbert Maitland, Dr. R. B. Wade presented the balance sheet of the Medical Benevolent Fund as set out below:—

He also moved that the following be the Office-bearers of the New South Wales Medical Benevolent Fund for the year 1918-1919:—

Trustees: Dr. Robert L. Faithfull and Dr. F. W. Hall.
Honorary Secretary: Sir Herbert Maitland.
Honorary Treasurer: Dr. R. L. Faithfull.
Members of the Committee: Drs. F. W. Hall and J. M. Gill.

Induction of President.

Dr. R. Gordon Craig, on vacating the chair, introduced his successor, Dr. A. A. Palmer. He pointed out that the

THE TREASURER IN ACCOUNT WITH THE NEW SOUTH WALES BENEVOLENT FUND.

Dr. 1917—

	£	s.	d.
Balance brought forward from 31st March, 1917	140	0	1
Subscriptions from March, 1917, to March, 1918	2	12	6
Cheque repaid into Bank by Dr. Faithfull	1	1	0
	£143	13	7

H. L. MAITLAND.

Audited and found correct—CHARLES F. WARREN.

Cr. 1917—

	£	s.	d.
Bank Fees	0	10	0
Cheque returned from Bank	1	1	6
Balance as per Pass Book 145 4 7			
Less Cheque to Sir Herbert Maitland for cash paid out of his own pocket (owing from last year) 3 2 6			
	142	2	1
	£143	13	7
At deposit in Savings Bank of N.S.W. Barrack Street, as per Pass Book, plus interest to 30th June, 1917	315	6	11
Balance at credit Current Account Commercial Banking Co. of Sydney, Bathurst Street Branch, as per Pass Book	142	2	1
Total Credit to date	457	9	0

affairs of the Branch were in safe hands with Dr. Palmer as President. He enjoyed the esteem of them all for his integrity, his high sense of honour and his outstanding fairness. He was convinced that while the chief office of the Branch was occupied by men of that type, its evolution would reach that point to which he had referred in his address.

Dr. Palmer stated that he appreciated the great honour the members had done in electing him their President. He felt that he was to some extent an interloper, for, had Dr. Blackburn been in the country, he would have occupied the chair. Speaking for himself, he recognized the difficulties of his position and stated that he would endeavour to follow in the footsteps of his eminent predecessors. It would give him great pleasure to be of assistance to any member of the Branch during the course of his year of office, and he invited them to come to him if they thought that he could help them in any way.

SCIENTIFIC.

A meeting of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on March 6, 1918, Professor R. J. A. Berry, the President, in the chair.

Dr. H. Douglas Stephens dealt with the epidemic of poliomyelitis. He said that the epidemic throughout Victoria was probably the second largest that had occurred in the State. In 1908 the largest epidemic recorded in the southern hemisphere occurred. The disease was not notifiable then. Between 1908 and 1918 there had been occasional outbreaks. The 1908 epidemic commenced at the end of February, when there were four or five cases, 27 in March, 40 to 50 each in April and May, and fewer in June, and eight in July. He had reason to suggest that the total number of cases was probably about 350. This was the autumn season.

The present outbreak began in November, when there were 4 cases, 11 in December, 31 in January, 97 in February, and cases were still coming in—in all, 143 to date. It was a summer outbreak, with the probable acme of epidemic in February. It seemed secondary in magnitude and in severity to the attack of 1908. It had not picked out the thickly populated districts as before, when Richmond, Collingwood, South Melbourne and Brunswick were districts specially infected. This attack, with the exception of East Brunswick, had been noted more especially in better-class residential suburbs, as Malvern and Caulfield. Country cases had been reported earlier in the outbreak than usual, thus suggesting healthy carriers of infection.

One child affected four years ago was said to have infected another infant. Two children were affected in three families. The average age of the patients had been 3½ years. The average proportion of males to females in America was 5 to 4. In the 1908 Victorian epidemic it was 77 to 47; and in the 1918 epidemic it had been 33 to 15.

In this epidemic more adults had been affected. Only two were affected in 1908, while he had been informed that ten adults had been affected in the present epidemic. Four of the adults had died.

Three deaths had occurred in children. It was quite possible that two others that had been put down to cerebro-spinal meningitis, were due to poliomyelitis.

In the last New York outbreak the death-rate was 27%, including atypical or non-paralytic cases. In 1908 the death-rate was 4½%.

The disease was spread by diseased and healthy carriers. The virus was present in the mucous membranes of the nose, naso-phrynx and intestinal canal. It was excreted from the nose, throat and intestines. The virus could be inoculated into monkeys. Its virulence increased on passage and then decreased, as in an epidemic.

The usual route of infection was the respiratory, but it might be the intestinal. In the last epidemic there were some breast-fed patients. The youngest was in an infant seven months of age. He had been informed that in the present epidemic an entirely breast-fed infant, aged 2½ months, had been affected and had died in three days with respiratory paralysis.

The incubation period was from 2 to 33 days, generally 8 days. In this epidemic it was 14 days in one case.

The invasive stage in 1908 was 24 to 72 hours; in the present epidemic it was prolonged to the third or fourth day. In 1908 paralysis came on and did not tend to spread. In this epidemic paralysis manifested itself, delayed in development and then progressed again. For example, one leg was affected; later the other leg became affected, and on another day the arm or back was affected.

Draper's classification of types was as follows:—

I. Two phases. (1) General or systemic. The onset was with fever, vomiting and diarrhœa. Listlessness and drowsiness followed, and then there was a gradual subsidence of symptoms. (2) Later the symptoms progressed, and pyrexia reappeared, and was followed by paralysis. This was the so-called dromedary type.

II. Many cases did not go beyond the systemic group of symptoms. These were the atypical pre-paralytic or abortive cases. These cases were a menace, as the patients carried the virus of the disease. Some members of one family had abortive symptoms, or even slight paralytic symptoms, especially the *quadriceps extensor* muscles. They did not want to walk, or the knee-jerks disappeared for a few days.

III. The systemic and paralytic symptoms might be fused.

In the last epidemic the majority of the cases were of Type III. In this epidemic there had been more of Type I., more of Type II., and fewer of Type III. Abortive cases constituted a large number, 50% to 80%, according to different authorities. It was open to the objection that some of these abortive cases might not have been instances of poliomyelitis. This could only be determined by repeated lumbar puncture, which was not often done.

There was a great necessity for the early recognition of the disease. There were no special signs. Usually fretfulness and drowsiness occurred, but there was nothing typical about the throat and skin signs. As a rule, sweating took place after the first day, and might be profuse, producing skin rashes of a sudaminal type. The constipation and fever produced rashes of a miliarial type, but there was nothing typical about them. Other symptoms were a peculiar facial appearance and headache.

Vomiting was often absent; it seldom occurred more than once or twice. Pains in the neck were common, especially on flexion. A pseudo-Kernig's sign was often elicited; muscle tenderness was often present.

Draper's spine sign was demonstrated as follows: One hand was placed under the shoulders and the other under the buttocks; the child was then lifted from the bed. Instead of sagging down, the back would become orthotonic or opisthotonic.

Diarrhœa was not infrequent at first; it was usually followed by constipation. Urinary retention for 12 hours had been common in this epidemic. Incontinence was rare. There was one case in the last epidemic and one in this, but the child was found to have been a bed-wetter.

Fever was seldom high. It was higher in polio-encephalitis than poliomyelitis. Drowsiness was occasionally present. Ataxia was rare. Paralysis was almost entirely of the bulbo-spinal type. Paraplegia was very frequent. There had been several instances of a pseudo-Landry's paralysis. Deaths had been of Landry type, affecting respiratory muscles and vital centres. Coincident involvement of the phrenic and intercostal centres was rare, but was fatal. Paralysis of the intercostal muscles alone was not always followed by death.

The other paralyses noted included two cases of facial paralysis, one of paralysis of the external rectus muscle of the eye, one case of pharyngeal paralysis with inability to swallow (gavage for ten days), one case of paralysis of the left *obliquus abdominis*, and one case of loss of speech with recovery. One patient had to be catheterized for 36 hours. In another chyluria had occurred for a short period some weeks after the onset.

Polio-encephalitis cases were too few in number to admit of any generalization. Local grouping was remarked in the previous epidemic. The cases of obscure disease in Broken Hill and Goulburn Valley were strongly suggestive of this. A dulling of sensibility was noted, especially in severe types of paralysis.

Vaso-motor disturbances and wasting were not pronounced features in this epidemic, as compared with the last. Wasting would be more apparent later on, while vaso-motor disturbances had been more pronounced toward the end of the last epidemic, and might yet occur in the present one.

Draper regarded the prognosis from four aspects: (1) What was the mortality? (2) Would paralysis appear? (3) Would

the paralysis advance? and (4) would the paralysis be permanent?

(1) Mortality was mild when compared with that in the New York epidemic: 4½% in 1908, 6% in the present epidemic, 27% in the New York outbreak.

(2) Would paralysis appear? This could only be determined during the early stage by the results of frequent counts of cells in the fluid from lumbar puncture. If there were less than 100 per c.mm. in the first 12 to 18 hours, there was rarely paralysis. If there were 200 or 500 per c.mm. in the first 12 to 18 hours there was often paralysis. If there were 700 to 1,000 per c.mm. the outbreak was often fatal. Exceptions occurred.

After 24 to 36 hours the cerebro-spinal fluid had no prognostic value. At the Children's Hospital the cell count of the spinal fluid had only been carried out recently. It was therefore impossible to make any dogmatic statement regarding the reliability of the procedure.

Patients who were very drowsy, often recovered. The cases in which the patients were very apprehensive were of grave significance. Loss of tendon reflexes suggested paralysis, but this was not necessarily so.

(3) Would the paralysis advance? There were no signs enabling them to answer this question. If there was no increase of the paralysis within six to eight hours after the initial palsy, the prognosis was good. In the present epidemic, however, the paralysis had progressed for a week in a few cases with as much as one or two days between the increments.

(4) Would the paralysis be permanent? Recovery was rapid in the first three or four weeks. It was gradual in the next three months, and very slow for the next few years.

Wickman had given the recovery-rate as 44%. In America it was put at 16%, which corresponded more nearly to the percentage in Victoria.

In dealing with the prophylaxis, he pointed out that isolation was essential. Opinions differed concerning the length of the period of quarantine. It was taken as from two to eight weeks in the United States of America. Some observers recommended the isolation of all contacts for ten days: others advocated isolating the patient and attendants for six weeks, keeping a watch on all contacts and patients who had suffered from abortive attacks for ten days. It had been proposed that schools should be closed, and that measures should be taken to prevent collections of children, except under medical observation. Children under 16 years should be prevented from travelling by trains, during a severe outbreak.

The patient's nose and throat should be sprayed with peroxide of hydrogen. Those in attendance should wash their hands and wear gowns and masks. An initial purge and a rectal enema should be given. The room should be darkened and quietness should be maintained. Complete rest in bed was essential. It had been suggested that a plaster cast might be required in certain cases. The limbs should be supported on pillows, and the weight of clothes should be kept off the feet. Warmth should be applied if necessary, or foments or hot bottles could be used for pain or tenderness of muscles.

The child should be placed in a prone position in bed, with the head of the bed raised, if this could be carried out without upsetting him. In this position cold applications could be applied to the spine. Leeches were of doubtful value. As soon as the systemic disturbance incidental to the onset had been mitigated, appropriate support by splints of poroplastic, wood or metal, was advisable.

Hexamine was often given, but was not of any use. It was liable to cause hæmaturia and strangury. Liquid and semi-solid food should be administered.

The rest should be complete for five or six weeks, as a rule, even in abortive cases. When the tenderness had disappeared, which took place in about six weeks, electricity and light massage should be used. Even in mild cases rest should be continued for some time after the muscle power has returned. The patient should not be allowed to sit up too soon when the back muscles were affected.

Active voluntary movements of weakened muscles should be encouraged; they were of more value than passive movements. Later, appropriate apparatus should be used, including splints and orthopædic apparatus.

No surgical method should be adopted for at least two years in an ordinary case. Lumbar puncture and the injection of immune serum constituted the most scientific and probably the best treatment. It should be done before the central nervous system was affected.

Immune serum was obtained from patients who had recovered from the disease six months to five years previously.

To obtain some such serum at the Children's Hospital, 35 children had been sent for; nine had appeared. Of these nine, five had consented to give blood. Of these five, three had given a partial Wassermann reaction. Serum prepared from the other two had been injected into two patients. In the first case it was given too late, but in the second case it had apparently done good.

The injection of horse serum did harm. The injection of adrenalin (0.5 to 2 c.cm.) had been advised, but was of doubtful value.

Dr. Stephens raised the question of the therapeutic value of lumbar puncture. It had been recommended a few years before as a routine procedure. More recently their experience had taught them that it did not influence the paralysis either for good or for bad.

In conclusion, he asked the indulgence of his audience for the manner in which his remarks had been put together. The very short notice that had been given him rendered it impossible for him to prepare a paper.

Dr. A. J. Wood stated that it had been that day decided to provide for reception of patients with poliomyelitis at the Infectious Diseases Hospital. Of course they would remain only until infectivity had gone. He would like to hear from Dr. Robertson as to the length of time they should be kept in the hospital. Referring to the paper, he stated that in the 1908 epidemic there were several patients with marked tenderness on the limbs. Those affected screamed and cried with pain, and this condition kept up for 12 weeks. It was noted that paralysis was very bad in such cases.

Dr. R. Webster remarked that in following Dr. Stephens' detailed survey of the current epidemic of poliomyelitis, he had derived much interest from correlating the clinical points brought out by Dr. Stephens, with his own observations on the pathological lesions. At the Children's Hospital, opportunity for post-mortem investigation was afforded in one instance only, *viz.*, that of a boy, aged six, who died with a rapidly ascending paralysis of the "Landry" type. Examination of a series of sections from different levels of the cord had impressed him with the inadequacy of the term *poliomyelitis anterior*. The sections of the lower dorsal and lumbar levels of the cord showed definite and striking evidence of involvement of the posterior horn of grey matter in the inflammatory process. The perivascular cell accumulations, and also the interstitial foci were present in an equal degree in both anterior and posterior horns, at the levels to which he had referred.

He put forward the suggestion that the changes he had noted in the posterior grey matter, which were known to occur in the posterior root ganglia, afforded a pathological basis for the tenderness stressed by Dr. Stephens, and commented upon by Dr. Wood.

With another portion of the cord a 5% emulsion in glycerine was prepared, and with 2 c.cm. of such emulsion a macaque monkey was inoculated by the intracerebral route. The injection was made into the left cerebrum, and after recovery from the anæsthetic, the animal was observed to have a flaccid paralysis of the right arm. This was undoubtedly operative; the monkey was apparently well until the fourth day, when convulsive seizures supervened, with vomiting, and a marked vertigo and ataxia. His temperature at this time was 38.8° C.. The convulsions and vomiting abated on the sixth day, but at this time a paralysis of the left arm was evident. On the morning of the seventh day the monkey was very ill, drivelling profusely, and the breathing was observed to be entirely diaphragmatic. In the afternoon, he died.

Time did not permit of any further details, but he would say that on clinical grounds they had good reason to believe that the monkey had been successfully inoculated with the virus of poliomyelitis. Pathological confirmation was not yet forthcoming, as the preparation of the necessary sections was a somewhat lengthy procedure.

As regards laboratory examination of the cerebro-spinal fluid in what Dr. Stephens had defined as the systemic phase of the disease, it did not appear to be very illuminating. The globulin content might be increased, but by no means constantly, and it was not until the supervention of the "spine sign," that definite cellular reaction became evident in the spinal fluid. It was at this stage that the estimation of the numbers of cells per cubic millimetre might assist in forecasting the course of the infection. It was regrettable that the efficient control of an epidemic by bacteriological methods was, in the present state of knowledge, impossible.

The only conclusive way of demonstrating "carriers" was by the transmission of the disease to a monkey, utilizing the naso-pharyngeal secretions of the suspect. This procedure, of course, was not practicable on the scale necessary to control an epidemic. Indeed, owing to the embargo which had existed for some years on the import of monkeys, it was extremely difficult to obtain any of these animals for experimental work.

Dr. Robertson referred to cases of polio-encephalitis at Shepparton, and read a letter he had received from Dr. Cleland, of New South Wales, in reply to enquiries he had made in reference to the disease "X." Apparently these cases of "X" were undoubtedly polio-encephalitis.

In regard to Dr. Wood's question as to the duration of quarantine, it seemed one rather for the pathologist to determine, for he alone could give the time limit of infection.

Dr. C. A. Altmann recalled an epidemic at Port Lincoln, which he had reported 20 years before. It was the first reported epidemic in Australia. The proportion of persons affected was large—30 out of 3,000. The spread of infection seemed to have followed the main traffic routes. The sexes were equally affected, and the patients were between the ages of 3 to 19 years; no deaths were noted, but serious deformities resulted.

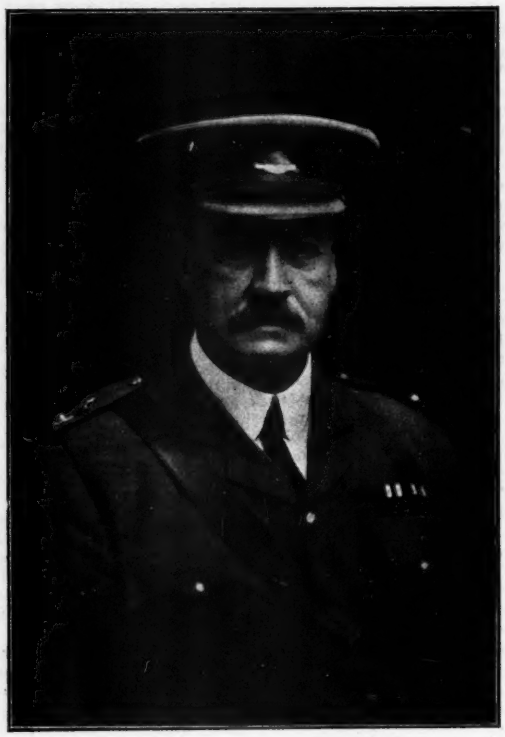
Dr. Leary saw a case about a year before, in which scurvy closely resembled poliomyelitis. A child had an attack of vomiting and diarrhœa. Loss of power in the right leg followed, with great pain, causing it to scream. An X-ray examination showed it to be a case of scurvy.

Dr. Stephens, in reply, said he had not seen many cases of protracted tenderness, as mentioned by Dr. Wood. In his cases the tenderness had usually disappeared after six weeks, and these patients, other things being equal, seemed to do better than when there was less tenderness. The question of quarantine was difficult, as the virus might be present in adults for years. Turning to the differential diagnosis, he stated that acute pneumonia, especially apical, and cerebro-spinal and other forms of meningitis, scorbutus and gastro-intestinal disturbances must be considered.

Obituary.

GEORGE LANE MULLINS.

George Lane Mullins, whose death was announced in last week's issue, was born in Sydney on August 24, 1862. He was educated at St. Mary's College, Sydney, and the Sydney Grammar School, and also received tuition from the Jesuit fathers. After leaving school he proceeded to Dublin, where he studied medicine and graduated in 1887. In the following year, he took a degree in arts and that of doctor of medicine, as well as the diplomas of the Royal College of Physicians of Ireland and licentiate in midwifery at the Rotunda Hospital. He studied at Trinity College and was also, for a time, a student at the London Hospital. Immediately after qualifying he returned to Sydney and soon built up a considerable practice. He was appointed to the staff of St. Vincent's Hospital, where he was, at the time of his death, Consulting Physician and Honorary Medical Officer in charge of the Electro-Therapeutic Department. In latter years he was appointed Honorary Director in the Department of Special Therapeutics at the Sydney Hospital. About ten years ago his association with the St. John's Ambulance Brigade led to his appointment as Commissioner in the Commonwealth. He was created a Knight of Grace of the Order of St. John of Jerusalem, and Deputy Chairman, Lecturer and examiner of the St. John's Ambulance Association of New South Wales. In 1913 he joined a Committee which had been formed for the purpose of starting the Australian Branch of the British Red Cross Society. At the outbreak of war he was serving as a member of the Executive Committee of the New South Wales Division of the Red Cross Society, and he also acted as Director of the Voluntary Aid Detachment. Earlier in his career he had filled the positions of Adjutant, Staff Officer for Medical Services and Acting Principal Medical Officer of the Second Military District in the Commonwealth Military Forces, and was also Chief Instructor at the Officers' School of Instruction and Examiner in Military Sanitation. In 1915, when the No. 4 Australian General Hospital was established at Randwick, he was appointed Officer Commanding with the rank of Lieutenant-Colonel.



He was an active member of the Eastern Suburbs Medical Association, and in 1899 was elected its President. In virtue of this office he became a Vice-Pesident of the Intercolonial Medical Congress of 1899, which was held at Brisbane.

George Lane Mullins enjoyed the affection, respect and confidence of a large number of patients and friends, especially among the members of the Roman Catholic Church. He was a skilful physician, was always considerate in his dealings with others, and was ever ready to exert his influence in the institution of social reforms.

Special Correspondence.

(By Our Special Correspondent.)

CANADA LETTER.

A.D.M.S. Invalids Appointed in Canada.

When the Military Hospitals Commission was appointed it was understood that, whereas the medical care and treatment of members of the Canadian Expeditionary Force who had not yet been overseas, should be provided by the

military authorities, the Commission should take charge of all medical arrangements in so far as the care of wounded and invalided soldiers was concerned. The arrangement has led to a good deal of duplication, and for some months now the appointment of an A.D.M.S. Invalids has been under consideration. The Government has now announced the appointment of Lieutenant-Colonel Alfred Thompson, the medical superintendent of the Hospitals Commission, as Assistant Director of Medical Services Invalids. Lieutenant-Colonel Thompson, under the direction of General Fotheringham, the Director-General of Medical Services, and with the assistance of a staff appointed from the Army Medical Corps, will take charge of all arrangements for the medical and surgical treatment of wounded and invalided soldiers. The office of the A.D.M.S. Invalids will be at Ottawa at the headquarters of the Military Hospitals Commission, and there will thus be linked together, in caring for invalid soldiers, the Military Hospitals Commission and the Army Medical Corps. The medical services in the institutions of the Commission will be performed by the Army Medical Corps. This arrangement will make it possible to give returned soldiers the benefit of the experience gained during the present war, as whenever possible their treatment will be directed by medical men who have had overseas experience. The number of men at present in the institutions established by the Commission is about 15,000, and the recent heavy fighting makes it necessary to provide more and more accommodation. The provision of convalescent homes and hospitals remains in the hands of the Commission, which has already accomplished a splendid work. Military hospitals and convalescent hospitals have been established throughout the Dominion, and institution has recently been opened at Vancouver, Moose Jaw, London, Kingston, and many other places. A convalescent home is at present under construction at Ste. Anne de Bellevue, which lies on the banks of the Ottawa River, near its junction with the St. Lawrence, about 32 kilometres from Montreal. The site chosen is adjacent to Macdonald College, with its unusual facilities for vocational re-education and training, since it is composed of a School of Agriculture, a School of Household Science, and the Protestant Normal School for Teachers of the Province of Quebec. The plans have also been prepared for a hospital on the lines of the Ontario Hospital at Orpington, in Kent, England, which is to be built in High Park, Toronto. At both these places the patients will have the benefit of beautiful surroundings.

Military Orthopædics.

The orthopædic work in connexion with members of the Canadian Expeditionary Force is under the direction of the Military Hospitals Commission, and some time ago the Commission established, at North Toronto, an Orthopædic Hospital, which is the centre of such work in Canada. This hospital has accommodation for 440 in-patients, and is equipped with the newest appliances for the treatment of soliders incapacitated during the war. Each case is given individual attention, and, if necessary, a special appliance or device is adapted to suit its requirements. A feature of the work which has been found of the greatest benefit to patients is a device which can be attached to any appliance and by which the patient can measure his daily accomplishment and progress; this has been found to be of the greatest value in counteracting depression and encouraging the patient to make every effort to improve his condition. A record is kept of the progress in each case.

In connexion with the hospital, a factory for the manufacture of artificial limbs has been established, and a number of disabled men are being trained to make these limbs. Later on, when a sufficient number of men have been trained, factories may be established in other parts of the Dominion. Such limbs are, of course, supplied by the Government, and the cost of future repairs or renewals will also be borne by the Government. A new type of arm has been devised by the Commission and is now being perfected; and it is thought that it will prove to be the most satisfactory artificial arm as yet manufactured.

A school for masseurs and masseuses has been established in Hart House, on the University campus at Toronto. This building, which was erected by the Massey Estate, has been converted into a training centre for workers in orthopædics, and research work is now being done there with a view to the standardization of equipment, etc., psychologists and physiologists co-operating in a system of re-education of mental and physical processes impaired by injury. Between 80 and 100 special pieces of apparatus have already been designed. Training is also given to workers who will carry on this work of re-education in other institutions established by the Commission, of which there are now over 70 in the Dominion.

In addition to orthopædic treatment, a disabled soldier is given vocational training while he is undergoing treatment and being fitted with an artificial limb if he should require such. It has been found that by commencing vocational training during convalescence, a man is given occupation which prevents him from brooding over his condition, and is of the greatest assistance in promoting recovery. In deciding upon the kind of training to be given each man, his own wishes are consulted as well as his capacity, former occupation and the possibility of his being able to earn a livelihood in the future. Training boards were established some months ago in the various provinces. The personnel consists of a medical officer, a vocational officer, and a third member who is in touch with industrial and commercial activities in that particular part of the country in which the board is established, and it is therefore in a position to give the best possible advice to men who are unable to resume their former occupations. As these boards are in close touch with industries, they are usually able to place a man in a position upon the completion of his training. It is difficult naturally for an adult to compete in a new trade with men who have been doing that special work for years, and, whenever possible, therefore, a disabled soldier is given supplementary training in the same, or at any rate a similar, line of work as he was formerly engaged in.

It has been decided to issue blue arm bands, "The Blue Badge of Honour," to men on the strength of the Military Hospitals Commission, as is done to disabled soldiers in England. At present there are about 12,000 men to whom this badge will be issued.

Exemption of Medical Students.

It has now been decided that medical, dental and veterinary students, with the exception of those in the first year, shall be exempted from service in the combative forces. First-year students, if physically fit, will be called up under the selective draft, while those in the later years will form a reserve corps to be called upon in case of military necessity. Upon graduation, if physically fit, they will be given the military training necessary to fit them to accept commissions in the Army Medical Service, and those who have already taken their military training will be given leave of absence until called to the colours.

Correspondence.

LODGE PRACTICE.

Sir,—The suggested "B.M.A. Lodge" propounded at the last meeting of the B.M.A. (Victorian Branch) is hardly a solution of the lodge doctor's grievances and troubles. It only perpetuates them. Lodge practice as at present conducted, especially in industrial districts, is the worst form of sweating, degrading to both doctor and patient. Without any pretence even of medical examination most of the patients are prescribed for and got rid of, otherwise the doctor would never get through his daily routine. The present type of cheap contract work should be abolished, and if the question of a revision of medical charges were gone into, one cannot help feeling that a system more profitable and agreeable to both patient and doctor would result. In Victoria the standard fee charged by general practitioners is 7s. 6d. in industrial and 10s. 6d. in other districts. This is equivalent to the pay for a day's work in the case of most working men. If the general fee were considerably reduced (the fee to be uniform in each district, and to be determined by a meeting of the doctors of that district in consultation with representatives of neighbouring districts, charging say 2s. 6d. for consultation and 4s. for visit as a general average) the large majority of lodge patients would find no

necessity to belong to medical benefit societies, particularly if their circumstances in life were considered when the doctor sent in his account for some protracted illness. Let him not forget in this case that under lodge conditions he would only have received 12s. or 15s. per annum. This is an aspect of the problem which should be considered. I, for one, would be very sorry to see the old order of things (or anything approaching it) re-established.

Yours, etc.,
J. LEON JONA.

Melbourne, 25th March, 1918.

Books Received.

GREEN'S MANUAL OF PATHOLOGY AND MORBID ANATOMY. Twelfth Edition, revised and enlarged by W. Cecil Bosanquet, M.D., F.R.C.P., Lond., and W. W. C. Topley, M.B., B.C., Cantab., M.R.C.P. Lond., University Series; 1918. London: Baillière, Tindall & Cox. Demy 8vo., pp. 603, with four coloured plates and 243 figures in the text. Price, 18s. net.

MANUAL OF MEDICINE, by Thomas Kirkpatrick Monro, M.A., M.D., Fourth Edition, University Series; 1917. London: Baillière, Tindall & Cox. Demy 8vo., pp. 1045, with 48 illustrations. Price, 18s. net.

TROUBLES LOCOMOTEURS CONSECUTIFS AUX PLAIES DE GUERRE, by Aug Broca, Collection Horizon: Précis de Médecine et de Chirurgie de Guerre; 1918. Paris: Masson et Cie. Crown 8vo., pp. 155. Price, 4 francs.

FORMES CLINIQUES DES LESIONS DES NERFS, by Mme. Athanassio-Benisty, Préface by Pierre Marie, Deuxième édition. Collection Horizon: Précis de Médecine et de Chirurgie de Guerre; 1918. Paris: Masson et Cie. Crown 8vo., pp. 232. Price, 4 francs.

DECOUVERTE DES VAISSEAUX PROFONDS PAR DES VOIES D'ACCES LARGES, by J. Fiolle and J. Delmas, Preface by Pierre Duval, drawings by H. Beaufour; 1917. Paris: Masson et Cie. Demy 8vo., pp. 119. Price, 5 francs.

LES LESIONS DU CORPS THYROIDE DANS LA MALADIE DE BASEDOW; Rapport présenté au XXIVe Congrès des Médecins, Aliénistes et Neurologistes de France et des Pays de Langue française, Session du Luxembourg, Août 1914, by Gustave Roussy; 1914. Paris: Masson et Cie. Royal 8vo., pp. 134.

NURSING ETHICS, a Lecture by T. Percy C. Kirkpatrick, M.D.; 1917. Dublin: Printed at the University Press. Pocket size, pp. 38. Price, 1s. net.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xvii.

Newcastle Hospital, three Junior Resident Medical Officers.

Hughenden District Hospital, Surgeon.

Department of Public Health, South Brisbane, Assistant Bacteriologist and Pathologist.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

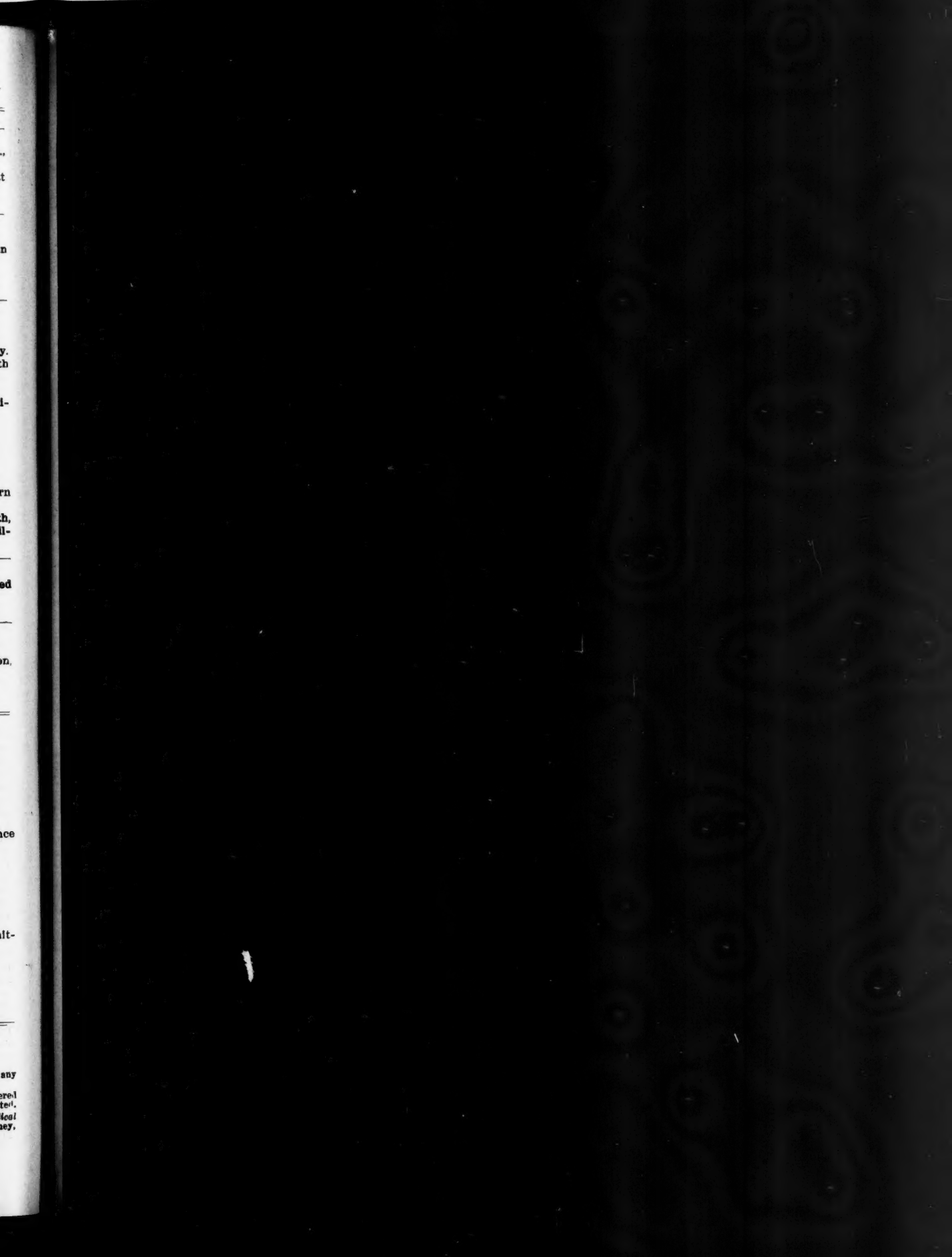
Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other contract practice. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia, Limited. Mutual National Provident Club.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Medical Officers to the Selwyn Hospital, North Queensland. Brisbane United Friendly Society Institute Cloncurry Hospital.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide. Contract Practice, Appointments at Renmark.
WESTERN AUSTRALIA. (Hon. Sec., Health Department, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Parramatta, Auburn and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
TASMANIA. (Hon. Sec., Belerive, Tasmania.)	Medical Officers in all State-aided Hospitals in Tasmania.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, N.Z.

Diary for the Month.

Apr. 9.—N.S.W. Branch, B.M.A., Ethics Committee.
Apr. 9.—Tas. Branch, B.M.A., Council and Branch.
Apr. 10.—Vic. Branch, B.M.A.
Apr. 11.—Vic. Branch, B.M.A., Council.
Apr. 12.—N.S.W. Branch, B.M.A., Clinical.
Apr. 16.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Apr. 17.—North-Eastern Med. Assoc. (N.S.W.).
Apr. 17.—W. Aus. Branch, B.M.A.
Apr. 18.—City Med. Assoc. (N.S.W.).
Apr. 19.—Eastern Suburbs Med. Assoc. (N.S.W.).
Apr. 19.—Q. Branch, B.M.A., Council.
Apr. 20.—Northern Suburbs Med. Assoc. (N.S.W.).
Apr. 23.—N.S.W. Branch, B.M.A., Medical Politics Committee: Organization and Science Committee.
Apr. 24.—Western Suburbs Med. Assoc. (N.S.W.).
Apr. 24.—Vic. Branch, B.M.A., Council.
Apr. 26.—N.S.W. Branch, B.M.A.
May 1.—Vic. Branch, B.M.A.
May 3.—Q. Branch, B.M.A.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.